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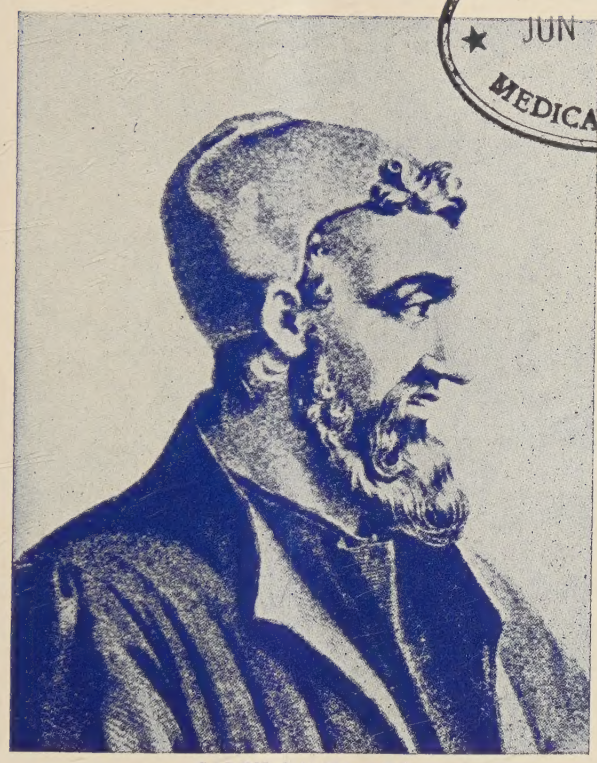

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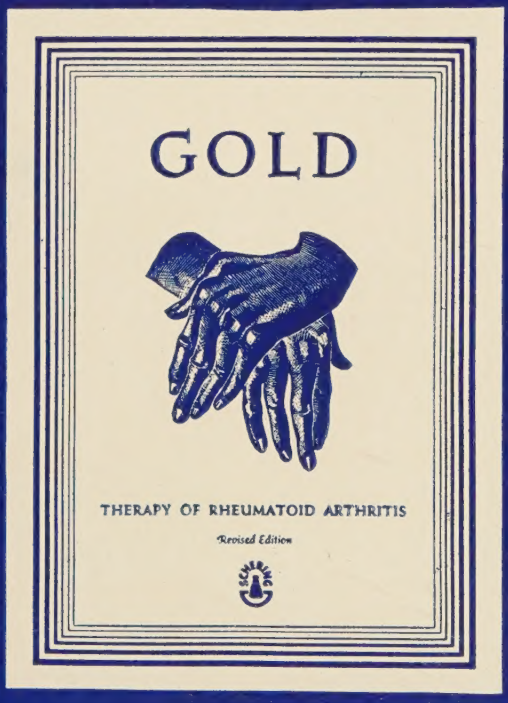

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Archibald Pitcairne and the Edinburgh Medical School

Edinburgh Medical School has been the Mecca of dents from the United States and Canada and while continues to hold a leading position among the med- l schools of the world, in North America with the e in prosperity and population, the teaching and ining in medicine and surgery have been more con- ed to the schools on this side of the Atlantic, wit tendency to gather knowledge from the European nters, chiefly perhaps, from those of Germany. But m the close of the seventeenth century American d Canadian medical students flocked to the old Scot- h city.

Among the reasons for the high position attained Edinburgh is that those responsible for the man- ement and conduct of its medicine and surgery were ulous enthusiasts whose sole aim was to raise to pre- inence the standard of teaching. Of these Dr. Archi- ld Pitcairne was regarded as the leading Scottish ysician of his time, and he it was who originated the linburgh Medical School. He first tried the church, en the law, and finally gravitated towards medicine. e studied both in Edinburgh and Paris; mainly in ris, obtained an M.D. degree at Rheims in 1650, d returned to Scotland where he soon had a large actice. He was one of the founders of the iatrome- anical or iatromathematical school of thought, based Harvey's demonstration of the circulation.

Pitcairne was a ready speaker and revelled in contro- rsy. When yet under forty, he was invited to the air of medicine by the University of Leyden, remained there for a year, and then returned to Edinburgh. It is said that at Leyden, an old and celebrated university, Pitcairne had among his pupils Boerhaave and Mead. He was a poet; a poem in Latin on the Death of Graham of Claverhouse was translated by Dryden.

Pitcairne was a man of jovial habits, intemperate in drink and speech, and a strong Jacobite. For writing an indiscreet letter severely criticizing the Government he was imprisoned and at his trial his defence was that he was in his cups and did not know what he was doing. His plea was allowed, and he was set free on condition that would contrive nothing against the Government.

His recklessness in speech and behavior showed only one side of the character of a remarkably able man who may be looked upon as a main agent in the establishment of the Edinburgh Medical School on a firm footing. The result has proved that his foresight was warranted and the witty scion of an old Scottish family should be esteemed by the medical profession of this continent as one of its great benefactors. The Edinburgh Medical School has numbered among its pupils some of the greatest names in the history of medicine and surgery in the United States and Canada.

Hodgkin's disease received its name in the year the British Medical Association was founded. Thomas Hodgkin was born in England in 1798. He recorded that the disease which bears his name had been vaguely outlined by Malpighi in 1665. Wilkes discovered the disease independently, but with a generous desire to perpetuate the name of his teacher, gave the condition the name of Hodgkin's disease. Hodgkins died in 1866.

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Open Forum

Cardiorenal Spasm and Migraine

To the Editor:—

Is cardiorenal spasm actually a vicarious phenor enon of migraine, intensified during the climacteri and replacing the cephalalgia?

In October 1936, there appeared in the final issue *American Medicine* an article by this author, under t caption, "Observations on the Probably Basic Etiolo of Migraine, with Special Reference to its Vicario Outlets". I had intended following this up with a di cussion of the evidence, which many years of an acti general practice had revealed to me, that there was definitely close relationship between migraine and h pertension. It now appears that at such places as t Mayo Clinic they are beginning to have similar idea

At this point it would seem entirely appropriate refer to an item which appeared in the *Medical Time* Feb. 1940, entitled "An Interesting Method for Trea ing Deafness". The writer refers to R. Ponsan (*Ot rhino-laryngologie internationale*, 23:535, Oct. 193 and "describes a method for treating deafness whi combines tubal insufflation with massage of the ty panic membrane". I can offer satisfactory evidence prove that I have developed this procedure to a poi that is well nigh the zenith of mechanical perfectio and have been using the method for over thirty yea However, from the period when I was writing editoria for the *Journal of the Missouri State Medical Associa tion* (under "Eddie" Goodwin), down to the presen I have learned that the specialist is not interested what the general practitioner has developed in the w of practical information in medicine, and that it almost impossible to interest many physicians, specia ists as well as general practitioners, in mechanic therapy.

Furthermore, it seems to be difficult to obtain t cooperation of manufacturers to relinquish the mana facture of the rotary type of "vacuum and compre sion" motor, for the perfected type of "push-pull" p ton. The old Siebert-Welch came nearest to fulfilli this need, but instead of perfecting their basically us ful motor, they commenced adding gadgets that led an expensive and difficult-to-maintain apparatus, a finally to the company's demise. I still have the origin instrument, purchased in 1913, and, while it has be overhauled several times, it is still functioning, in se eral "special" fields of medicine. The objection to t rotary type of motor for this work is that it is n adaptable for furnishing the interrupted type of pr sure for vibration which is so essential for massagi the eustachian tube and other areas.

The symptoms of cardiorenal spasm occurred m frequently at night, and almost as often the physici called would state that the patient had a "heart attac Most of my patients in this category have been mal who have been awakened suddenly with cardiac rhythmia (fibrillation). The other distressing sympto is an intermittent diuresis of a spasmodic type, which some patients apply the term "achy". A ty ical characteristic of this syndrome is the colorl urine. The change takes place from the normal amb colored fluid to the colorless type suddenly, and

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sumes the original coloration when the symptoms have subsided.

I am firmly convinced that the etiological factor lies in the aspects of the disease which were discussed in the above-mentioned article on migraine, but in this particular phenomenon, that is, the cardiorenal spasm, the vagus is the causative agent. This "wanderer", it will be recalled, originates deeply from the fourth ventricle, where the "narrowing of structures at the base of the brain", discussed in the etiological phases of migraine, helps to account for the damming up forward, towards the eye, of ventricular fluid, and the production of the prodromal eye symptoms which precede the terrifying cephalalgia.

During the climacteric period, especially in the male, the disturbed impulses, travelling along the vagus, change their course toward the heart, and the spasmodic diuresis is in all probability set off through the involvement of the vagus ganglia, with vasomotor fibers of the renal ganglia. This would account for the disturbance in the filtering function of the renal tubules, and the production of the colorless urine.

The late Dr. Given Campbell, one of the country's most renowned neurologists, and my former professor of neurology, used to lay special stress on the appearance of the colorless urine in many cases of classical migraine. To me, the interesting phase of this cardiorenal picture is the almost total absence of other disturbing symptoms, and when one elicits a history of the attack, one feels pretty much like trying to learn something of the thing which set off an attack of migraine. Most often, however, in the cardiorenal picture, there is a strong suspicion of an emotional strain (and the arms of Venus), and one of the strange phases this dilemma, is the fact that the "strain" may ha occurred as far back as a week or even longer.

The prognosis appears to be fairly good, except fr the viewpoint that the heart stands a good deal abuse in the process of arrhythmia, and in the case the hypertensive, there may be considerable dama to the vascular system, thus leading to a possible v cular accident. In the group which I have treated the past, I have never found evidence of organic volvement in cases of this type. The treatment in cated is to get the recalcitrant vagus under control have obtained the most prompt results by administ ing a combination of ergotamine tartrate, phenob bital, and an alkaloid of the belladonna group. Ne tive pressure, interrupted, applied as a counterirrita to the spinal ganglia, seems to achieve the desired sult, when the patient is ambulatory. Powerful doses synthetic atropine will sometimes stabilize the und sensitized terminals of the vagus to relieve the c dition.

WILLIAM H. THALE
St. Louis, M

Suggested Memorial to Baron Larrey

To the Editor.—

In the interest of historical accuracy, I wish to dir attention to the priority rights of Baron Dominiq Jean Larrey in "surgery to the front". Baron Larre preeminence in the origination of the "flying am lance or field hospital" was the outgrowth of his de tion to the wounded soldier, especially in the Eg

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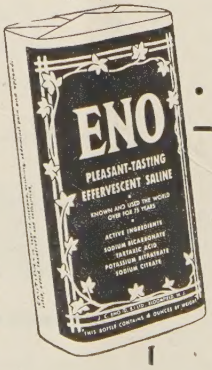

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—SWARTZ & REILLY, "*Diagnosis and Treatment of Skin Diseases*," p. 66

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tian campaign of the Napoleonic war. As father of military surgery, it would seem plausible that an ambulance for air, land or sea should be named for Baron Larrey as a fitting memorial to his indefatigable zeal, instead of wasting the tribute on such novel names as *Shangri-la,* in spite of a somewhat inflexible military regulation as to just how these vehicles of mercy must be designated.

Rose Alexander
Los Angeles, Calif.

The War on Infantile Paralysis

The report of the National Foundation for Infantile Paralysis, Inc. shows that during the fiscal year ending February 1943 the Foundation made grants and appropriations totalling $1,278,836.04 in five main categories: virus research, after-effects research, education, medical publications, and epidemics and public health.

In virus research grants totalling $478,632.66 were authorized during the year. Investigations have been carried out in various laboratories to determine the nature of the viruses which cause infantile paralysis, but no one factor has yet been proved to be important. A careful study of immunity has been made, but results have been indecisive. The curative action of drugs in the treatment of infantile paralysis is rendered difficult by the uncertain clinical course of the disease. Two hundred drugs were studied, none of which proved to have any value in controlling the infection.

For research on the after-effects of infantile paralysis the National Foundation's program made grants and appropriations totalling $243,791.77. The results of research in this field demonstrated that increase knowledge of the pathological changes in the nervou system as a result of infantile paralysis is necessary fo a better understanding of the disease and improve treatment. The direct damage to the muscles is no completely understood and in this field the researc has been intensive. In 1939 a grant of $6,000 was mad to the University of Indiana to carry on "investigatio and study of four recognized methods of treatmen namely, Harvard, Kendall, Lowman, and Sister Kenn —the investigation and study of these four recognize treatment methods to be carried on simultaneously

The Kenny Method

In May 1940 a grant was made by the Nation Foundation to the University of Minnesota to suppo a program of study of the Kenny method for six seven months. The preliminary report made by t University at the end of this period was favorable, t supervising physicians being impressed with the r sults, but it was believed that too few cases had be treated to justify definite conclusions. A second gra was made for further study and approximately o hundred patients were treated in 1941. On the ba of the report received at the end of this period t medical advisory committee of the Foundation re ommended that the method be made available to Am ican medical and public health authorities, and th nurses and physical therapy technicians be given t opportunity to learn the technique. Funds for the pu pose were furnished by the Foundation. It was alized that one institution could not train the numb of technicians required, so other centers were open

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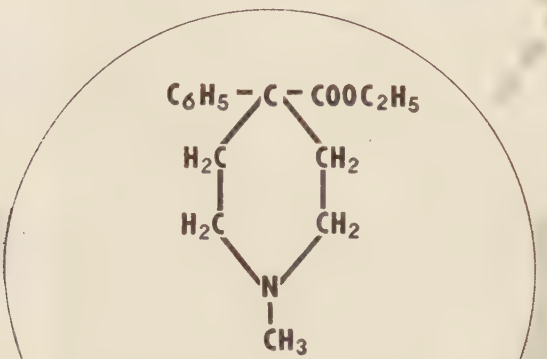

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An effort was made to include the teaching of the Kenny method in the curricula of all schools of medicine, nursing, and physical therapy. By the end of 1942 further observation had convinced many physicians that the method was of value and additional grants were made by the Foundation for an enlarged training program. In evaluating and teaching the Kenny method the total amount appropriated by the National Foundation to date is $301,000.

It is pointed out that the Kenny method is not a cure, that no absolute cure for the disease has yet been found, nor has the medical profession been able to prevent its occurrence or control its spread. However, it is believed that the Kenny method is a very real contribution to treatment and that in the opinion of many doctors it reduces the crippling after-effects.

Grants and appropriations were made by the National Foundation in the field of education to the amount of $229,690.82. No attempt has been made to carry on an educational program limited solely to the treatment of poliomyelitis. Nurses have been trained in the public health and hospital aspects of orthopedic nursing in general, and physicians have been trained in orthopedic surgery and virology. Scholarships have been made available to induce additional well-qualified persons to enter the field of physical therapy. Grants have been made to medical schools, schools of physical therapy and hospitals in widely separated areas whereby the Kenny method can be demonstrated and taught to physicians, nurses and physical therapy technicians. An additional specialized educational program has been operated at the Georgia Warm Springs Foundation where graduate physical therapy technicians have been provided a year of postgraduate instructio in all phases of care of poliomyelitis patients.

To carry on the National Foundation's program i the field of epidemics and public health grants ap propriations totalling $63,320.79 were authorized du ing the year. The services of the Foundation in th various epidemics of 1943 were handicapped by wa conditions but by working through one central agenc and local groups the record has been one of real service

The report gives a broad view of the vast work don by the National Foundation for Infantile Paralysis i trying to find the cause, prevention and cure of this sti mysterious disease. In spite of the efforts of great sci entists, "little is known of the nature of the virus whic produces the disease or its method of spread from pa tient to patient. The exact rôle of flies, mosquitoes water or food in its transmission is still uncertain There is no drug known which will prevent or cure No method of immunization has been developed. N one knows the factors that determine whether a child will have a mild, undiagnosable case, or whether ther will be paralysis, or death. These are problems tha require research and the attention of the best intel lects of our day."

Tabic arthropathy, known as Charcot's joint, is named fo Jean-Marten Charcot (1825-1893), the great French neurol ogist. Charcot was inclined to the study of art as a youn man, but lack of funds determined him to study medicine. H was especially interested in diseases of old age and chroni diseases. He was an early exponent of the use of electricity i medicine, made studies in pathological anatomy, describe gastric crises in tabes, and wrote a paper on skin diseases de pendent on the influence of the nervous system. Charcot wa made professor of nervous diseases, a chair being especiall founded for him.

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Closed Plaster Treatment of Wounds

The closed plaster method of treating wounds is no longer in the experimental stage. Trueta used it successfully in Spain during the Civil War; the Russians are firm believers in it; British and Australian medical men report on it from Africa and the Middle East, and our own surgeons are using it today. It is interesting to collate the reports over a period of years and observe the steady progress made in perfecting the technique.

Beginning with Trueta's work, J. Eastman Sheehan (*Medical Record,* Sept. 4, 1940) comments on Trueta's success with the method. At a meeting of the Section of Orthopedics of the Royal Society of Medicine, held in London, on November 30, 1940, Dr. Trueta was a guest of honor. Mr. S. L. Higgs, president of the section, opened a discussion of the closed plaster treatment of wounds, pointing out the following merits of the method which were then recognized: It relieved pain and toxemia and secured immobilization of the broken limb, at the same time allowing mobility of the patient. It promoted the growth of highly vascular granulation tissue and owing to the rapid covering of the bones with this tissue, necrosis and sinus formation were exceptional and union took place in minimum time. The rapid healing of the soft tissues and union of the fracture made nerve suture possible at an earlier stage than in the last war. Faulty technique and failure to get sufficient drainage were disadvantages at times, and another drawback was the difficulty in maintaining extension. In cases where extension was necessary, Higgs had deferred application of the closed plaster until the fracture was well on the way to union. The smell, general "messiness" of the wound, and a septic dermatitis on the surrounding skin were other drawbacks discussed at that time. The quality of the skin was also sometimes affected.

Dr. Trueta, in commenting on the method, pointed out that British experience fortified and advanced his experience in Spain. The Spanish cases were usually treated quickly, and while the British cases were treated several days after injury, nevertheless, they healed very well. In his experience dermatitis did occur with closed plaster treatment, but he did not consider it a serious complication.

Experience with the closed plaster technique is described by Lieutenant E. T. Rumble and Lieutenant Commander J. A. Millspaugh in the *Military Surgeon* December 1943. Compound comminuted fractures of the lower extremities were treated on a Navy ship with excellent immediate results. The patients were comfortable, their care was easy, there were few toxic reactions, no mortality and few complications. They cite the following ten points as important factors in the handling of wounds of this type:

1. Operation was delayed until the man was definitely out of shock and blood pressure had been at 110/6[illegible] for at least three hours.

2. Before the operation of debridement and immobilization it was found convenient to have on hand at least a thousand cc. of compatible (not merely typed) blood for each case.

3. Prophylactic doses of gas gangrene antitoxin were given early, but not while men were in shock.

4. Rapid debridement of every wound was considered advisable, regardless of the interval of time fol-

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lowing the injury. Under open ether anesthesia, the wound was enlarged in all its dimensions with removal of obvious accessible foreign bodies, necrotic, noncontractile muscle tissue, and loose bone with necrotic marrow.

5. Amputation was performed only if loss of arterial blood supply was obvious. Two to five days should be allowed to determine this if there is some continuity of at least skin and subcutaneous tissue.

6. Sulfathiazole was used locally, five to ten grams for each wound, but not more than fifteen grams given to any one man.

7. Wounds were carefully packed with vaseline gauze.

8. In wounds involving the femur, a unilateral hip spica was used. The thigh should be immobilized with at least sixty degrees of flexion on the abdomen. The plaster across the hip joints was reinforced laterally with wooden pieces, one-half by two by twenty inches, to prevent cracking of the spica in the groin later.

9. After three weeks, if the cast became loose from the absorption of discharges, another cast was applied instead of using reinforcement. This should be done under general anesthesia. All casts are padded with stockinette, and with thin felt added for bony prominences. In femur cases the secondary casts were constructed as bilateral hip spicas, carrying the plaster immobilization down to the middle of the thigh on the well side. The authors found this afforded the best immobilization of the involved hip joint.

10. Postoperative oral medication with sulfathiazole, multiple vitamin preparations, ferrous sulfate, and calcium lactate was started as soon as possible.

The Flight Surgeon

Major General David N. W. Grant, of the Army Air Forces, presents an interesting and informative report of the work of the flight surgeon (*Military Surgeon,* March 1944), whose chief duty is to maintain the physical and mental fitness of the men engaged in combat flying. Consequently, aviation medicine comprises everything in military medicine plus the conditioning of the human body for existence in high altitudes. The wide scope of the work of a flight surgeon is shown in a brief review of some of the activities of the Air Forces' Medical Services since the outbreak of war. The officer strength of the Services has grown from about one thousand to more than twenty-two thousand, an increase of twenty-one hundred percent. Of our ten thousand medical officers, the flight surgeons and aviation medical examiners who are, in effect, apprentice flight surgeons, comprise 3,900; in 1941 there were four hundred. The capacity of the School of Aviation Medicine, Randolph Field, Texas, has increased from around one hundred in 1941 to over two thousand last year. In addition, the school instructs personal equipment officers, aviation physiologists, and enlisted men as the flight surgeon's assistants. Major Grant says that one of the great triumphs of aviation medicine in this war has been the use of the airplane in evacuating patients from combat zones. Since Pearl Harbor it is estimated that 125,000 patients have been evacuated, which demonstrates the practical value of the airplane in ambulance service.

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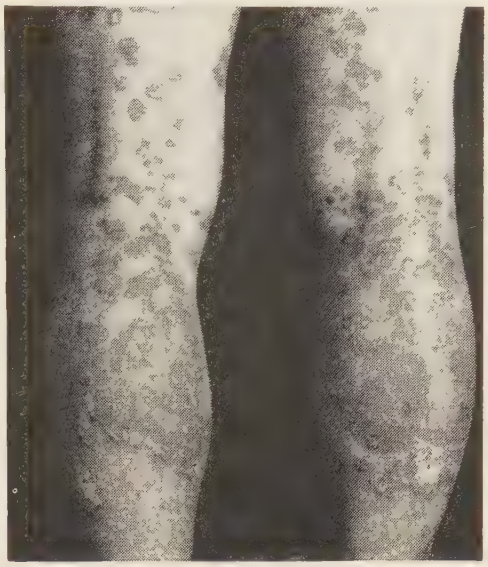

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of which the otherwise wasted time of convalescence has been used for physical reconditioning and useful military education. Centers have also been established for the rehabilitation of physically and psychologically wounded soldiers returning from overseas.

The rapid advances made in aero medical research will no doubt make aviation medicine an important chapter in the history of this war. The Air Forces main centers of research are at the Aero Medical Laboratory at Wright Field, Ohio, where a high altitude training program is carried out and all oxygen equipment tested and the Research Laboratory of the School of Aviation Medicine where the physical and psychological selection of men for flying training and the neuropsychiatric problems of flyers are major subjects of research. The psychomotor tests, developed at the School of Aviation Medicine, are the most valuable of all the vast number of psychological tests used to weed out men who will not make good flyers.

The author points out that war forces the flight surgeon to make improvisations but one way or another results are obtained which make them proud of their share of keeping Flying Fortresses in the air.

Electric Shock Therapy

N. K. Rickles (*Northwestern Medicine* 43:2, February, 1944), presents an interesting report on one hundred cases treated in a private sanatorium in which electric shock therapy was used effectively. He says that electric shock therapy is today the best procedure in producing convulsions for treatment of mental conditions. The two most commonly used agents for producing convulsions are metrazol and electric energy. Electric shock therapy has largely replaced metrazol for many reasons; principally because of its simplicity in operation, avoidance of the dangers of intravenous medication, shorter duration of the shock and complete amnesia for the treatment. In conclusion, the author says that electric shock therapy in proper hands is a safe and effective means in treatment of the mentally ill. It is particularly indicated where depression is the presenting symptom, as eighty-seven percent showed rapid recovery. In the acute paranoid and catatonic conditions it is almost equally effective, although the word "cure" is used with hesitation, as the schizoid personality persists even after treatment. It has no place in the treatment of manics. It can be utilized in the treatment of selected cases of arteriosclerosis and obsessional neurosis. Private care is indicated in mental diseases having a relatively short expectant duration, thus enabling the patient to absent himself from his every day existence with a minimum of time loss, and avoidance of legal and social implications brought about by being committed to a state institution. In the few cases that did not respond adequately to treatment, no harm was done, as it was still possible to have these patients committed to state institutions, where further treatment could be administered. It was found that patients made a better convalescence with the least number of convulsions necessary to bring about a remission. Wherever possible these patients, following discharge from the sanatorium, were given psychotherapy at the office, and an effort was made to prevent the recurrence of the condition, by remedying as much as possible the social, economic and emotional problems involved.

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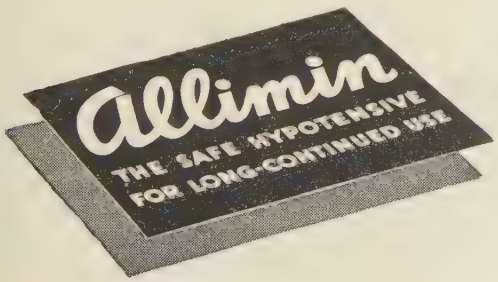

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Our Contributors

Jerome M. Schneck, M.D., Topeka, Kansas, received his medical degree from Long Island College of Medicine, Brooklyn, and served a rotating internship at the Jewish Hospital, Brooklyn. He was formerly a lieutenant in the Field Artillery Reserve, U. S. Army, and a member of the U. S. Field Artillery Association. He is a lieutenant, Medical Department Reserve, U. S. Army, and is a member of the Reserve Officers' Association of the United States. At present he is resident in psychiatry at the Menninger Clinic.

* * *

Herbert G. Cohen, M.D., New York, N.Y., was graduated in medicine from New York Medical College, Flower and Fifth Avenue Hospitals, and served as intern at the Hospital for Joint Diseases, New York, and as resident surgeon at the New York Post-Graduate Medical School and Hospital, Reconstruction Hospital Unit. He has done research work in children's cardiac status with the use of fluorescein, and normal circulatory time. At present he is on active duty in the Medical Corps of the United States Army.

* * *

Kate Freeman Miller, M.D., Corona, New York, received her medical degree from New York University College of Medicine in 1926 and served a rotating internship at the Flushing Hospital. She has received the honorary degrees of Phi Beta Kappa and Alpha Omega Alpha. She formerly specialized in obstetrics and gynecology and was assistant attending on the staff of the Queens General Hospital, and at present is a matriculate at the Skin and Cancer Hospital. She is greatly interested in the syphilis problem and hopes to continue her investigative work on the subject. Her hobby is her farm in Long Island to which she devotes much of her leisure time.

* * *

Georgia Leffingwell, Ph.D., New York, N. Y., received her degree at Columbia University. For the past few years she has been engaged in research work on glycerine and has contributed many articles to the literature.

Mathematics and Human Affairs

The endeavor to describe human affairs in mathematical terms is an old one. A mathematician at one time discovered a statistical relationship between the price of hogs and the number of students electing Latin in a certain group of colleges; he then announced a coefficient of correlation of 0.3999, and what it meant nobody could tell. What is energy? What does the conservation of energy mean? The final importance of energy resides in the fact that it is the thing which is conserved. It is a mathematical concept. But statistical predictions dealing with organisms often go astray. When it is remembered that an exhaustive discussion of the dynamics of a single atom of helium transcends our powers, no wonder an atom of carbon, a molecule of sugar, a molecule of protoplasmic substance, a living cell, a toadstool, a tree, a guineapig, and a professor of medicine offer infinitely greater complexities. (Cf. Dunham Jackson on Relation of Statistics to Modern Mathematical Research in *Science*, January 18, 1929.)

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Medical Consultations from the Patients' Point of View

By a Sixty-four Year Old Layman from the Midwest

Medical consultations are a great mystery to me. Sometimes I wonder why there are not more of them, and again I believe there are too many. With the new crop of doctors coming up each year, composed of men who are undoubtedly brilliant else they could not have passed the rigid examinations required, and the fact that there is not so much mystery about sickness today as in olden times, one wonders why the attending physician should scare his patient to death by even suggesting a consultation. If he would do a little extra reading and get some curbstone advice from his medical friends, he might be able to dispense with consultations.

On the other hand, there is the doctor who is mystified but does not desire to show his ignorance, and out of pure stubbornness lets his patient suffer when a consultation might do a lot of good.

In my boyhood, some fifty years ago, our family physician—an old German with old-fashioned remedies—herb tea, sulphur and molasses, leeches, etc.—abhorred consultations. He had wonderful confidence in his own ability, did very little reading, and managed to get by. He pulled one brother through typhoid by means of baths and diet; lost another brother through water on the brain, and his mother from acute indigestion. Both of these patients might have been saved by consultation! But he pulled father through prostatitis and severe heart attack without consultation.

Eight years ago I had "a severe coronary thrombosis" while my attending physician was on a two-weeks' vacation and a stranger was called in. My doctor returned and the stranger refused to get off the case and my doctor refused to come on the case when the other doctor was on. Ethical bunk! My wife in a panic called in two or three doctors for consultation. None were needed.

Last summer I had eczema in one ear—at least it was so diagnosed by a physician in whom I had great confidence. The cure seemed slow in materializing so a friend suggested a young specialist, who pleaded ignorance as to what was wrong with me but suggested "skin cancer"! He called in a skin man for some curbstone advice, who told him he was wrong. I went to my original doctor, who effected a cure with x rays and salve. I cite both of these instances to show why patients are at sea on the subject of consultations.

I know that doctors practice a great racket in consultations. Sometimes the patient is impatient on account of slowness of cure and indicates the same to his doctor who calls in another doctor, Doctor "B", who, as a rule, agrees with the diagnosis of the physician in charge, but suggests a small change in the treatment to save his face. This renews the patient's confidence in his own doctor. Now Doctor "B" owes Doctor "A" a consultation and the next time one of his patients is in a similar condition, he suggests a consultation and calls in Doctor "A". This practice appears to be going on at an alarming rate.

To summarize the whole situation: If the doctor is sincere he can convey to his patient the fact that he is thoroughly conversant with the case and can effect a cure, but when he is not absolutely certain about it and there is some doubt in regard to diagnosis, he is entitled to ask for a consultation. In many cases the doctor has diagnosed the case correctly but is not certain of the treatment, in which case a specialist should be called. A little more sincerity on the part of the doctor and a little more resistance to racketeering will clarify the whole situation and establish confidence between patient and doctor.

Another incident, which I neglected to mention, shows the abuses of consultation. Two years ago I had a pain in my left hip. My regular doctor being on another vacation, I called in a well known surgeon who diagnosed the condition as sciatic nerve trouble and had me go to his office for deep therapy, suggesting that Dr. M. be called in consultation. I took five treatments and at each the nurse suggested my seeing Dr. M. I objected and said that if medical assistance was necessary why could I not see the doctor in his own office. This I did and he examined me and confirmed the surgeon's opinion but suggested my seeing Dr. M. to stop further high pressure. I decided to resort to electric pads and in about a week I was well. The surgeon sent me a rather large bill which I objected to—I also objected to the racketeering on behalf of Dr. M. The surgeon apologized profusely and cut his bill. I paid and everybody was happy except Dr. M.

Then again there is the case of one of the most prominent physicians in a certain city. He is a sort of dean among the younger doctors; spends a lot of time at the biggest hospital in the city, visits around and knows some of the patients of the other doctors. He is asked for advice in general and before anyone knows it he is called in consultation, and if the patient dies or recovers there is his consultation fee!

I know of an eastern industrialist who came to a certain city and had severe intestinal pains. He consulted the best known physician who made a diagnosis of appendicitis. The patient asked for the names of four of the best surgeons, and the physician named A and B, C and D in that order. The patient asked which one he would recommend. The doctor declined to advise, so the patient said, "Who would you have if you needed the operation?" The doctor said, "Dr. D". Dr. D performed the highly successful operation. My consultant would be the one my doctor would have for himself.

Disease and War

The prevention of disease and the prevention of war are today the two great world problems, says David John Davis (*Diplomate,* Jan. 1944). The way is pretty plain in this matter of war, he continues, be it against a pathogenic microbe or against a pathological nation of people. As we have organized preventive medicine we must organize preventive war. In medicine we do not talk about peace with the disease, with the parasites, with the tubercle bacillus, for example. We do not propose to write a peace treaty with these causes of disease. We do not sit around a peace table with our disease-producing enemies. We wage continuously either an active or a preventive war. We should have a continuous preventive war program fashioned along the lines of our continuous preventive disease program.

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THE EFFECT OF SYPHILIS ON THE PREGNANT WOMAN AND HER OFFSPRING

*An Analysis of One Hundred Cases**

KATE FREEMAN MILLER
Corona, N. Y.

The routine Wassermann testing of mother's bloods on an obstetrical service, such as that of the Queens General Hospital, offers an opportunity for studying the effects of syphilis on the pregnant woman and her offspring. While one hundred luetic mothers do not constitute a large number, it is adequate to emphasize certain phases of the syphilis problem in the pregnant woman, and the consequences that may be expected. In this analysis we could demonstrate the significance of the serologic tests during pregnancy; the effect of syphilis on the offspring; the effect of treatment on the mother, and the effect of treatment on the living child.

Material

Three thousand two hundred consecutive deliveries occurring in the period between November 1935 and May 1938 yielded one hundred syphilitic mothers. Among the three hundred and forty-one colored mothers in those delivered there was an incidence of fourteen percent luetics, and among the remaining gravid white women, 1.8 percent. This gave a total incidence of 3.1 percent. It is interesting to compare these figures with the figures at Bellevue Hospital as presented by Speiser (1). His total was 3.6 percent, with 11.6 percent among the colored mothers and 2.6 percent among the white. The incidence given at Johns Hopkins is 16.2 percent among their colored mothers.

The importance of diagnosing syphilis in the general population has at last reached its proper realization in New York State. The importance of diagnosing and treating syphilis in the pregnant woman has long been stressed by every physician who gave any thought to the subject. It is sad but true that obstetricians have only within the past few years become more anxious to seek out syphilitic mothers and to give them early and adequate treatment. Beck (2) estimates the incidence of syphilis in private obstetrical practice to be about one percent. I believe that this figure will decrease with the obligatory premarital blood Wassermann test in New York State.

Syphilis is one of the causes of stillbirths and neonatal deaths which responds most readily to treatment. It remains to point out that syphilis once contributed the highest figure to newborn mortality rate, and now it contributes one of the lowest figures, since the majority of the offspring of syphilitic mothers survive. Aside from the tragedy of every case of prenatal syphilis is the expense of medical care which must be carried in large part by the whole community through its public health agencies. To prove that this is a remediable deficit, Moore (4) states that in Denmark, where the Wassermann test has been used freely much longer than we have used it, there were less than one hundred prenatal syphilitics in a four million population reported in 1930.

It is commonly understood now that pregnancy benefits the young syphilitic woman. Nearly twice as many nonpregnant women showed relapse and progression of infection especially neurosyphilis, in the Cooperative Clinic Group (10).

Diagnosis of Syphilis in the Pregnant Woman

We found the majority of syphilitic mothers to be ignorant of their disease. They gave a negative history of exposure or of the primary or secondary stage. Aside from a few who withheld information, the ignorance of these women can be explained. A primary lesion most often occurs on the genitalia, including the cervix. Chancres of the labia may be small and are often disregarded. Chancres of the cervix are more often picked up in the hunt for suspected primary lesions than in a routine gynecological examination. The spirochete may gain access to the tissues through the columnar epithelium of the cervix without any macroscopic lesion—syphilis d'emblée. Secondaries may never appear. They may be of such a faint macular variety that even the patient misses them. Syphilis acquired just before or soon after conception may never have any acute manifestations.

The prenatal syphilitics were most likely to be ignorant of their condition. Parents prefer to hide such knowledge from their children. With the help of an efficient social service we were able to ferret out these cases, and reveal whole syphilitic families. All of this points to the importance of the serological test to diagnose syphilis. Eighty-one percent of our patients were discovered by serodiagnostic means alone. The proved source of infection could not be established in some cases—whether prenatal or acquired.

The diagnosis of syphilis in one hundred cases on the obstetrical service of the Queens General Hospital for the three-year period 1935-1938, was as follows: By history, fourteen; discovery in a previous pregnancy

*From the obstetrical service of the Queens General Hospital, Jamaica, N. Y.

by routine test, twenty-two, by manifest luetic offspring, five; by routine test in present pregnancy, multipara, forty-four, primipara, fifteen.

In the presence of a negative serodiagnostic test the diagnosis of syphilis may be missed. As an example, I shall cite the case of H.J. This patient was a gravida 3 when she registered at our clinic. She had been delivered of her first baby at home six years before. No routine tests were made by her doctor. The child was born with "sores" on its body, according to her story. For this reason at a later date the child's blood was tested and the report given the mother was four plus. The child was given treatment at once, and soon after the mother again became gravid. This time a blood test was made on her and it was reported negative. Although her child was under treatment it was not considered necessary to treat the mother. The second child is now five years old, and repeated serodiagnostic tests have been made. All tests have been negative. In this, her third pregnancy, the mother's routine blood Wassermann report was strongly positive.

Effect of Maternal Syphilis on the Offspring

This is a wide subject to cover and includes many considerations, such as: the stage of infection in the mother; serology of the mother during pregnancy; the treatment received by the mother; the time when treatment was started, and how persistently treatment was applied.

An untreated syphilitic woman, according to Moore (8), has only one chance in six of bearing a living, healthy child, as compared with three chances in four for a healthy woman. Among the children born alive of syphilitic mothers, both the mortality and morbidity rates are much higher than among the children born of nonsyphilitic mothers. Sylvester (9), studying a group of infants with clinically recognizable syphilis from 1901 to 1914, estimated that the mortality was approximately eighty-five percent within the first year of life. During 1915 to 1919, when the newly discovered drug, arsphenamine, first came into use, the mortality dropped to thirty-three percent. In this later period, not only patients with clinical evidence of syphilis, but also those with positive serology, were included. The Wassermann test at this time had become generally available. In the period 1920 to 1925, with the organization of syphilis clinics and social service, infant mortality in the first year due to syphilis dropped to twenty-one percent. Thus, within a period of twenty years medicine gave the prenatal syphilitic child a sixty-four percent better chance of survival. Sylvester also pointed out that syphilitic children are more susceptible to intercurrent infections than nonsyphilitic children.

Our findings agree with those of Moore at Johns Hopkins, that miscarriages before the fourth month of gestation are not due to syphilis. Moore uses this observation to stress the importance of starting treatment early in pregnancy. Among the first ninety-four miscarriage cases treated at the Queens General Hospital in November 1935, we did not find one syphilitic mother. None of these miscarriages was later than sixteen weeks gestation. In our group of one hundred luetic mothers, sixteen gave a history of miscarriages of less than sixteen weeks. Six of these admitted induction. This leaves a ten percent abortion rate, which appears to be the same as in nonsyphilitic mothers. (Ten percent here means that ten women out of every one hundred multigravidæ gave a history of one or more abortions.)

Third generation syphilis is not too rare an occurrence. In Moore's clinic third generation syphilis appeared in 4.5% of the pregnancies among prenatally syphilitic women.

The Fournier-Finger criteria provide that before a case can be considered third generation syphilis, it must fulfill the following requirements:

1. Proved acquired syphilis in grandmother and preferably also in grandfather.
2. Proved prenatal syphilis in mother, acquired syphilis must be excluded and the husband must have negative serological reactions for the disease.
3. Proved syphilis in the baby.
4. Manifestations of syphilis must appear soon after birth in the second and third generations.

Because of the difficulty of obtaining histories, and because history is so essential in establishing third generation syphilis, we cannot confirm many of these cases. In our small group we can confirm one such case. There were others of whom we could only be suspicious.

J.T., aged twenty, was delivered of a child one year before admission to our prenatal clinic. This baby was born with bullous lesions on the palms and soles. It was an eight month premature, delivered on the house service of a nearby hospital where the records are available. The baby received stovarsol after birth but died at the age of one month. No routine prenatal Wassermann test had been made on the mother. After delivery the mother's blood gave a strong positive reaction to Kahn and Wassermann tests. She was observed to have Hutchinson's teeth. Her husband's serology has been repeatedly negative. The maternal grandmother upon questioning admitted that she had been, and still was occasionally being treated for syphilis. She also told the following interesting story. Several years before the birth of J.T. this woman had born a normal, healthy child. Because her own child was so healthy she was selected to wet-nurse an ailing infant. While nursing the sick infant, she developed a "sore" on her nipple. She received no treatment. After this she gave birth to a male child, the older brother of J.T., who has been found to have a positive blood Wassermann reaction. J.T. was the third birth. Only after this birth did J.T.'s mother start treatment. At the age of eleven years a serological test on J.T. was found to be positive. She then received a "few injections".

The stage of infection in the mother has some bearing on the transmission of the disease to the offspring provided the serological reaction in the mother is positive. Twelve of our patients may be considered latent luetics. They gave no other evidence of syphilis than a positive Wassermann reaction and denied knowledge of the disease. Blood Wassermann tests taken on their babies six weeks after birth revealed four positive syphilitics among seven babies born to the group. The other five babies did not return for follow-up observation.

In two of our one hundred mothers interstitial keratitis developed during or after this pregnancy. These patients had received little or no treatment before the onset of the complication. Blood Wassermann tests in

oth cases were positive. The babies of both patients ave had persistently negative serological reactions.

We had no cases with primary lesions, and only one ase with delayed secondaries. This latter patient had eceived adequate treatment, but her baby had a pos- tive reaction at the age of one month. Two other pa- ients gave a history of a primary lesion within one ear of this pregnancy. Both received adequate treat- nent. One was delivered of a child whose Wassermann est at six weeks was positive. The serology of the ther baby was negative. It is evident that the earlier he infection, the more likely a syphilitic child will e born in spite of treatment.

Significance of the Serological Test for Syphilis in Pregnancy

Williams (6) presents a group of fifty-six pregnant women with negative blood Wassermann tests who were syphilitic. Careful questioning revealed syphilis in the husband and/or a suggestive history of syph- ilitic offspring in preceding pregnancies. In this group, all of whom were untreated, fifty-two living syphilitic infants were born. Among our own cases, there was one mother with repeatedly negative serological reac- tions who gave birth to two children with positive blood Wassermann tests. The father's test was also strongly positive. It was observation of this type of case that produced Colles' Law. However, we cannot accept that a nonsyphilitic mother can produce infec- tion in her children. When the pregnant woman's serol- ogy is negative and there is reason to suspect syphilis, her consort becomes an important factor for investi- gation. Only twenty consorts of the one hundred syph- ilitic women were known to have syphilis; forty-two could not be traced. There is no way to subject a hus- band to a serological test if he refuses to present himself.

The syphilitic woman with a negative serological reaction gives a better prognosis to her offspring. If the mother's serology is negative, the stage of infection will not influence transmission of the disease. In the Cooperative Clinic Group ten times as many syphilitic children were born when the mother's blood was posi- tive during pregnancy as when it was negative.

There is an accepted error in some quarters that pregnancy may render a woman's blood positive to the Wassermann test although she is not syphilitic. Moore has demonstrated that pregnancy will not produce a false positive reaction, but that a negative reaction may be obtained at times in proved syphilitic preg- nant women. The following case history bears out Moore's contention:

R.C. gave a negative complement fixation reaction but a 2-3 plus Kline exclusion, and a 1-2 plus Kline diagnostic test at four months gestation. I have cited the results of all the tests to show the value in this case of the highly sensitive Kline exclusion test. This moth- er was not treated. She was delivered of a macerated syphilitic full-term fetus. Her postpartum Wassermann reaction was 3 plus. Her Kline flocculation tests were both 4 plus. In a previous paper (7) we showed the value of the more sensitive precipitation tests.

A false positive serological test may result as a tech- nical error. This, too, should be carefully watched, and repeat tests made in the event of such possibility. Here, too, the precipitation test becomes a check on the com- plement fixation test and proves the worth of such double testing.

Effect of Treatment

Herein lies the key to our prenatal syphilis problem. Adequate, preferably intensive treatment of the mother from the earliest stage of pregnancy will give us ap- parently nonsyphilitic children. Just what shall con- stitute adequate treatment seems to vary in the minds of various authorities. As few as six and as many as twenty injections of the arsenicals and also of the heavy metals, have been recommended by different syphilologists. According to the Cooperative Clinic Group, when a mother receives ten injections of an arsenical and ten injections of a heavy metal, treat- ment having been started before the fifth month of pregnancy, a living apparently nonsyphilitic child will result in ninety-one percent of the cases. The import- ance of beginning treatment before the fifth month of pregnancy is stressed.

Only fourteen of our mothers received adequate treatment in accordance with the Cooperative Clinic criteria. Of these one was delivered of a full term mac- erated fetus and four living children manifested posi- tive blood Wassermann tests at six weeks of age.

This unsatisfactory result turns our attention to the treatment angle which must receive closer study. We have not limited ourselves to any one drug. A longer period of observation of the infant may also be of im- portance.

Twenty mothers received no or inadequate treat- ment. Only six of their babies were apparently normal.

In the offspring of twenty inadequately treated or untreated syphilitic mothers there were three macer- ated fetuses; two premature neonatal deaths; nine positive serological tests at six weeks, and six normal.

I wish to note that not one of the living syphilitic infants gave any of the expected clinical manifesta- tions of syphilis during the ten day puerperal period.

In the offspring of eight patients untreated in this pregnancy but treated previously there was one macer- ated fetus; three positive blood Wassermann tests at six weeks, and four normal.

While intensive treatment before pregnancy may protect future offspring, this cannot be depended upon, and every mother with a history of syphilis should re- ceive early and intensive treatment in each pregnancy.

Pregnant women tolerate the arsenicals at least as well as the nonpregnant. One fetal death may be as- cribed to treatment. A mother received her second in- jection of an arsenical, only 0.1 Gm. of neoarsphena- mine being given. An arsenical hepatitis developed and she was delivered of a stillborn fetus. This mother re- covered. The pregnant woman, as any other patient under treatment, must be observed for arsenical intoxi- cation. Her urine should be tested regularly for the presence of albumin, and she must be carefully inter- rogated for pruritus or any evidence of jaundice de- tected before each injection is given.

The purpose of treating the pregnant syphilitic woman is aimed at preventing the development of syphilis in her offspring. Since the fetal tissues do not seem to be invaded until the sixteenth week of intra- uterine life or thereabouts, we can understand the im- portance of pushing antisyphilitic treatment early in pregnancy. If this first opportunity for shielding the

fetus is missed, our next best chance lies in forceful treatment of the already infected product of gestation to cure it before birth. How much treatment is required to accomplish these results has not yet been definitely established, except for the previously mentioned findings of the Cooperative Clinic Group.

Treatment of the mother after delivery falls into the category of treatment of the syphilitic adult. The factor of protection of the offspring is now removed. If the mother is in an active stage of syphilis, her treatment must continue immediately as for any other syphilitic. These are considerations which too often are lost sight of in caring for gravid and postpartum syphilitics. The resumption of antisyphilitic therapy should not be postponed longer than usual because a woman has borne a child. The uterus itself is sufficiently involuted at six weeks postpartum so that, other factors being excluded, menstruation can start again and the uterus assume its normal functions. I merely state this as one criterion of the normal physiology of the patient. However, I would not delay antisyphilitic treatment for this physiological return.

Diagnosis of Syphilis in the Offspring

The most reliable criteria for the diagnosis of syphilis in the newborn seem to depend upon: lesions of the skin and mucous membranes; positive serological reactions after the fourth to the eighth week of life, and autopsy findings. Other criteria have been included from time to time, but in our experience only these have been of value in establishing a diagnosis. Other observers on larger groups of cases have come to similar conclusions.

Serological reactions to the Wassermann test, we assume, are in some way related to the presence of reagins manufactured by the body in response to a syphilitic infection. That such reagins may be passed through the placenta to the fetal circulation has been accepted not only for syphilis but for other diseases as, for example, measles. In the case of syphilis the presence of the reagins constitutes the much discussed phenomenon, syphilotoxemia, mentioned by Dennie and Pakula (15). Syphilotoxemia is manifested by positive serology in placental or newborn blood in the absence of syphilis, therefore in the absence of spirochetes, and should not be confused with the false positive Wassermann reactions of older individuals. Thus, syphilotoxemia may explain the close similarity in the serological reactions of mothers' bloods, cord bloods, and newborn bloods for the first few weeks of life.

Cord Wassermann Test

We agree with other observers who maintain that syphilis in the offspring cannot be diagnosed by the reaction of the placental blood. The reason for this conclusion is the strong similarity which we found in the Wassermann reactions of maternal, and their respective cord bloods. Of eighty-four cases, ten postpartum blood Wassermann tests were 4 plus, while their corresponding placental bloods were negative. In the other seventy-four cases there was close agreement between the two corresponding serological reports.

According to Moore, a child with a negative cord Wassermann reaction is five times as likely to be normal as a child with a positive reaction. All of our babies with negative cord blood reactions were found to have negative serological reactions at six weeks. Treatment on the basis of a positive cord Wassermann reaction test is not justifiable. It is of possible value only from the prognostic angle.

The Wassermann reaction values on cord blood and their corresponding postpartum bloods in eighty-four cases were approximately as follows: Close agreement in sixty-five cases, postpartum more positive than cord blood in nineteen cases. In no cases was the cord blood more positive than the postpartum blood.

Serological Test on Fetal Blood Within the First Ten Days of Life

Fetal blood tested within the ten day puerperal period closely approximates the reaction of cord blood. The blood was taken from our babies on the seventh day. In only six percent of cases did cord and fetal blood reports disagree. In these instances the fetal blood was found to be negative although the cord blood had been positive. In the first few weeks of life, the infant's blood may be more an index of the mother's disease than of its own. Dennie and Pakula state that syphilotoxemia lasts about three weeks. Moore has observed its presence for as long as seventy days, although he accepts a four week period for the disappearance of syphilotoxemia.

Sylvester, and Jeans and Cooke wait eight weeks before they feel that the serological test on the baby is indicative of syphilis in the child. We accepted six weeks as a convenient period, because that is the interval after which the mother brings her baby to the pediatrics clinic for follow-up care. The question arises: When is an infant syphilitic? According to Denny and Pakula, any repeatedly positive serological reaction appearing in the newborn infant which lasts more than three weeks should be regarded as positive evidence of syphilis. If all findings are negative, the blood should be examined at the third, sixth, ninth and twelfth months, and thereafter twice a year for the first five years, and after that at the discretion of the examiner. Moore suggests testing the baby every two weeks until the fourth month, then every six months until the end of two years. Every child of a syphilitic mother is a potential syphilitic, and must be observed as such. However, I would hardly dare to accept the practice of those who treat every child of every syphilitic mother, serological reactions notwithstanding. It is our opinion that the period of observation should extend to or beyond adolescence.

There is a family which attends our prenatal syphilitic clinic. Mother, father, and two siblings have been persistently positive. One child was repeatedly negative until he reached the age of nine years. Then for the first time his blood Wassermann test was reported positive.

Placenta Examination

Placenta examinations for syphilis have proved unsatisfactory in our hands. After examining several hundred placentas, I found in the placentæ of nonsyphilitic mothers the same pathology previously considered diagnostic of syphilis. Both Dill and Moore report similar observations from their studies of placentæ. The diagnosis of syphilis of the placenta must rest upon the isolation of the spirochete. This is a long drawn out and arduous laboratory procedure, and involves making many sections from each placenta.

X Ray of the Long Bones

This is another procedure that has proved so unsatisfactory in our hands that we have discontinued its use. We have not found evidence of epiphysitis or of osteochondritis often enough where we expected to find it. We also found confusingly similar radiologic pictures in normal infants. It has been demonstrated by Caffey that prenatal bismuth therapy may produce shadows in the ends of the shafts of the long bones simulating syphilitic osteochondritis.

Dark Field Examination of the Umbilicus

This test has not been employed by us. It is a test that has been used very little in this country and a negative test does not rule out syphilis. The procedure is worthy of further study because it promises to be of some value in the diagnosis of syphilis in the newborn.

I have preferred throughout this paper to employ the terminology of Kolmer. He reserves the term prenatal syphilis to indicate syphilis acquired by the fetus during its intrauterine development. The term congenital syphilis is applied to the fetus infected only during its passage through the birth canal. We had no such cases in this series.

Summary

One hundred syphilitic mothers, delivered on the obstetrical service of the Queens General Hospital among 3200 consecutive deliveries, were studied between November 1935 and May 1938. These cases emphasized the importance of the routine serological tests for syphilis in order to make a diagnosis. The favorable effect of treatment upon the offspring was stressed, particularly in patients who had begun treatment before the fifth month of pregnancy. From this study it is felt that serological tests on cord blood, and on infants' bloods within ten days of birth are not reliable diagnostic criteria of syphilis in the offspring. Placenta examination, except in the presence of spirochetes, and x ray of the long bones for osteochondritis and epiphysitis, have not proved in our hands sufficiently diagnostic of syphilis.

Conclusions

1. One hundred known syphilitic mothers were observed at the Queens General Hospital during their prenatal and puerperal periods.

2. The diagnosis of syphilis in the majority of cases must depend upon the findings of serological reactions.

3. The desirability of double testing by means of a flocculation and also of a complement fixation test on each blood specimen is demonstrated. The importance of repeating doubtful tests is also emphasized.

4. To obtain the best results in checking the transmission of syphilis from mother to child, and also in searching out contacts who require treatment, an efficient social service department is indispensable.

5. An opportunity was given in this study to watch the offspring of these syphilitic mothers for from ten days to six weeks (in some cases) after birth.

6. The chance for a syphilitic woman to bring her pregnancy to term and to deliver healthy offspring will improve with the early application and persistence of treatment.

7. The purpose of treatment of the pregnant woman is aimed particularly at protecting her child from developing the infection. Treatment after delivery is aimed at cure of the individual patient.

8. Patients with recent infections are more likely to transmit the disease to offspring in spite of treatment.

9. The determination of the presence of syphilis in the newborn must depend upon clinical evidence of the disease and/or a positive serological reaction after the fourth to the sixth week of life. Observation of negative offspring must continue at the discretion of the physician, because of the delayed appearance of clinical and serological manifestations of syphilis even after many years.

10. In our hands a diagnosis of syphilis in the newborn could be definitely made only on clinical lesions of skin and mucous membranes, late positive serological reactions, or positive autopsy findings for syphilis.

I wish to express my gratitude to Major C. Rein, chief of the Division of Serology, Walter Reed Hospital, for his suggestions concerning the presentation of this material.

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Endocrine Treatment of Adolescent Acne

Harry O. Nyvall (*Urol. and Cutan. Rev.*, Dec. 1943) presents a concise description of the factors involved in adolescent acne. The appearance of acne at the time of adolescence, he says, suggests dysfunctioning in the relationship of the gonadotropic hormone of the anterior pituitary gland and the ovaries, incoordination of the sympathetics, and hyperfunctioning of the dormant adrenosterones of the adrenal cortex. He reports two cases, giving in detail the medication and method of treatment followed.

He considers acne an exudative dermatosis caused primarily by the stimulation of the sebaceous glands under the endocrine imbalance which may occur at puberty. The secondary cause is infection of the follicles and adjacent tissues by the staphylococcus. The use of endocrine preparations administered parenterally, is the choice of medication which should be accompanied by whatever other drugs, vitamins, antiseptics or bactericidal agents the specific condition requires.

GLYCERINE IN PREVENTIVE MEDICINE

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Even those who are familiar with the wide use of glycerine in materials for treating disease after it has appeared may possibly overlook the fact that this versatile fluid also finds extensive application in materials and methods for disease prevention. Thus, glycerine enters into the preparation, or is employed for the preservation, of vaccines and related biologicals. It is frequently an essential aid in laboratory procedures to determine the cause and thus help arrest the spread of disease. It is an ingredient of the extracts used for the diagnosis, prophylaxis, and treatment of allergic disorders. As a component of antiseptics and the like, glycerine helps to prevent infection and disability. It finds an important place in skin protectives and thereby has been of great assistance to the heavy war industries in their battle against workers' dermatoses.

Two of the greatest scourges of mankind, smallpox and tuberculosis, are being conquered by means of materials using glycerine. The official (U.S.P.) smallpox vaccine is a glycerinated suspension of the vesicles of vaccina from healthy vaccinated animals of the bovine species. The material for making such vaccines is obtained and prepared under aseptic conditions; the pulp is then ground and suspended in an aqueous solution of glycerine. In the laboratory diagnosis of this disease, of importance in the prevention of the spread of infection, the material to be tested is frequently stored in tubes containing sterile, neutral glycerine (1).

Tuberculins play a vital rôle in determining the presence of tuberculosis organisms, and glycerine is a component of most of these biological products. The oldest of these, and one still widely used, is official tuberculin-Koch or old tuberculin. This is a sterile solution of the soluble products of the growth of the tubercle bacillus in a special liquid medium containing fifty percent glycerine. This has been used for the diagnosis of tuberculosis by hypodermic injection. A modification of this procedure, the intracutaneous test devised by Mantaux, is usually employed for children (2). In this case, a vial of glycerine bouillon is sometimes provided as a control for the actual tuberculin (3).

A further improvement in the tuberculin test, one especially useful in diagnosing tuberculosis in children since it eliminates the use of the needle, is the patch test developed by Vollmer (4) and favorably received by many pediatricians and public health workers (5,6). The material used in the Vollmer test consists of thin filter paper saturated with tuberculin, dried and cut into squares 1 x 1 cm. and placed on adhesive tape 1 x 3 inches in size. Each strip of tape contains two tuberculin test squares placed on each side of a control square, the latter consisting of filter paper saturated with glycerine broth. Through the natural moisture of the skin, the tuberculin is dissolved and absorbed sufficiently to render a reliable cutaneous reaction.

In the opinion of Myers (7), "The tuberculin test is the most effective epidemiological agent in tuberculosis ever devised by man."

Rabies or hydrophobia is another disease that may be prevented from running its terrifying course by the use of an effective vaccine. In the procedure developed by Pasteur in 1885, spinal cords from rabbits inoculated with rabies virus are hung over potassium hydroxide for from one to six days. Small pieces are cut from these cords and stored in glycerine. To prepare the vaccine for administration, a small section of the cord is ground and mixed with a little additional glycerine and saline solution (8).

More specifically, Pasteur antirabic vaccine, as now used, is prepared from virus made in accordance with the general method of the U. S. Public Health Service. One-fifth of an inch of dried cord, emulsified in 0.6 cc. of sixty percent glycerine-containing 0.3 percent trikresol solution, is supplied and this is diluted with 2.5 cc. of sterile physiological salt solution in syringes for injection. The treatment consists of twenty-one doses administered at twenty-four hour intervals (3).

Diphtheria antitoxin, employed both as a curative and a prophylactic agent in this dangerous disease, has been preserved since its standardization by Ehrlich in 1897 in sixty-six percent glycerine-saline solutions. In 1939, Smith (9) of the (British) National Institute for Medical Research showed that solutions of standard diphtheria antitoxin in such glycerine-saline solutions lost less than ten percent of their potency during six years' storage at -4°C.; at room temperature a loss of about twenty-three percent occurred after four years.

More recently, in studies of diphtheria immunization, Volk and Bunney (10) pointed out that the standard diphtheria antitoxin of the National Institute of Health may be diluted 1:10 with sixty-six percent neutral glycerine, in which dilution it keeps indefinitely. Just before use the solution is made up to 1:6000 with saline.

To overcome the need for hypodermic injections for repeat immunization against tetanus following primary stimulation by injection, a large pharmaceutical organization has developed a tetanus toxoid, for nasal instillation. This preparation is a purified and concentrated antigenic solution of tetanus toxoid, in physiological saline, containing five percent of glycerine (11).

Glycerine enters extensively into bacteriological study and procedures. In culture media it is frequently used for differentiating and identifying various species. Thus, it is a component of Kiefer's nutrient medium for gonococci, Lubenau's glycerine-egg medium, Bordet-Gengou medium, potato juice medium, Sabouraud's medium for moulds, and many others. Glycerine is an important constituent also of media for cultivating tubercle bacilli, such as the standard glycerine-potato medium and Petroff's medium (12). More recently developed media continue to utilize glycerine for studying these bacilli (13, 14, 15).

Another important step in the identification of microorganisms is their microscopic appearance and staining characteristics. Glycerine is an important ingredient of such staining media, whether for the study of bacteria, blood films, or tissues. Some years ago, Huntoon (16) showed that the addition of glycerine to the dye solutions used for these staining purposes served not only to increase the keeping properties of the solutions but also enhanced the clearness and sharpness of

he preparations. Hence it is understandable why glycrine is included in many new and improved staining ompositions and methods (17, 18, 19, 20, 21, 22).

In the treatment of allergies a large majority of the oncentrated preparations used in diagnostic skin tests r desensitizing procedures are produced by means of lycerine (23, 24, 25, 26). In such products, glycerine ot only serves as the extracting agent, but also mainains the potency and sterility of the antigens. Morever, as pointed out by Unger (27), the use of high lycerine percentages definitely slows up the rate of bsorption of pollen extracts and thereby keeps down onstitutional reactions. Newer diagnostic procedures, uch as the "match-test" recently developed by Vollner and his associates (28), also take advantage of lycerine.

Severe asthmatic paroxysms may be prevented or heir severity greatly lessened by the inhalation of fine-y dispersed sprays or mists usually containing 1:100 pinephrine (adrenalin). In recent years allergists have earned that the addition of glycerine to such solutions ffers many advantages. Cooke (29), for example, has bserved that when ten to twenty percent of glycerine s added, a better mist is formed.

Recently Lockey (30) observed that when five per-ent of glycerine was added to epinephrine sprays irriation and dryness of the throat was reduced eighty-wo percent. Moreover, longer periods of relief were btained and there was more frequent and productive xpectoration. In England, Wilcox (31) used 12.5 per-ent of glycerine in asthma sprays not only as a stabilzing agent but also because he felt that glycerine probbly increases the penetration of the substances in soluion as well as being an emollient and sweetening agent. His well-rounded, stable preparation for use as a spray consists of:

Atropine sulfate	0.10 Gm.
Sln. adrenalin hydrochloride (1:100)	12.50 cc.
Ephedrine hydrochloride	0.50 Gm.
Hyoscine hydrobromide	0.025 Gm.
Chlorbutol	0.25 Gm.
Glycerine	12.50 cc.
Distilled water, to make	100.00 cc.

In more severe asthmatic cases, where injections of drenalin are indicated, the use of "slow epinephrine" preparations lessens the number and frequency of the injections. The slowly absorbed gelatine-epinephrine mixture of Spain and his associates (32) and the aqueous suspension of adrenalin base developed by Naterman (33), both contain substantial proportions of glycerine.

From his experience with casualties during dim-outs and air raids, Lee (34), in England, developed the following solution of iodine in glycerine which proved satisfactory and which overcame many of the disadvantages of other iodine preparations:

Iodine	200 grains
Potassium iodine	1 ounce, 160 grains
Distilled water	1 ounce
Glycerine, to make	20 ounces

The solution is employed full strength or diluted with an equal volume of glycerine, depending upon the type of wound.

Occupational dermatitis is recognized as one of the prime causations in industrial disability and absenteeism. Now it is recognized that cleanliness based upon simple soap and water measures is the most important element in preventing these dermatoses (35, 36, 37, 38). However, skin protective creams and ointments which form a barrier to deleterious materials are also useful. Glycerine is frequently used in such preparations (39, 40). Not only is it a good solvent, spreading agent and emollient, but is in itself a good barrier to certain harmful substances. While it is recognized that such glycerine-containing preparations must be made to meet specific industrial conditions, the following socalled general purpose skin protective, described by Tyler, (41) will serve to illustrate their use:

Stearic acid	12 parts
Lanolin	3 parts
Glycerine	6 parts
Potash soap (40%)	5 parts
Magnesium stearate	10 parts
Water	50 parts

Our armed forces not only in tropical countries but also the temperate and arctic zones require huge quantities of insect repellants (42). Glycerine is an important component of these as well as of sun screen compositions to guard against severe sunburn (43).

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11 West Forty-Second Street

Symposium on Historical Medicine

GENERAL GEORGE MILLER STERNBERG

An Appreciation

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Topeka, Kansas

During time of war it would seem quite appropriate that outstanding persons in the history of our armed forces be remembered. One such figure is General George Miller Sternberg (1838-1915), a former Surgeon General of the United States Army and one of the leading physicians in the history of American medicine.

Oddly enough, relatively little biographical material on Sternberg is to be found and the essential available material is presented in the story of his life prepared by his wife (1). To date, this is probably the most authoritative account of his career.

As has been mentioned previously (2) Hume has stated that among the greatest contributions to science by medical officers of the United States Army are three books, each one of which is considered a milestone in its field (3, 4). Sternberg's contribution, termed the first American textbook on bacteriology (5), is listed with the first American book on surgery by Surgeon John Jones and the first American pharmacopœia by Physician General William Brown. In view of this list of "firsts" it should be mentioned that Garrison (6) has alluded to Sternberg as the first American army surgeon to take up the study of bacteriology.

Sternberg, who was born on June 8, 1838, was the son of a Lutheran clergyman and descended from a German family. His mother was the daughter of a professor of theology at Hartwick Seminary (Otsego County, New York) of which institution Sternberg's father was at one time the principal. Sternberg's early years were occupied with studies at the Seminary followed by teaching there and also in rural schools. He was concerned with the subjects of mathematics, chemistry, and natural philosophy, and is said to have spent leisure hours studying anatomy and physiology under Dr. Horace Lathrop, of Cooperstown.

Although Sternberg received his M.D. degree in 1860, from the College of Physicians and Surgeons, New York, he began his formal medical schooling at Buffalo (7). After receiving his degree he practised medicine for less than one year at Elizabeth City, New Jersey (8).

On May 28, 1861, Sternberg was commissioned an assistant surgeon in the Regular Army (9), inaugurating a distinguished medicomilitary career. He rapidly saw action and was in the service less than two months, when on July 21st of the same year, while serving with General George Sykes' division in the Army of the Potomac he was captured at Bull Run (10). The enemy could not hold him long, however, for he escaped to Washington where he joined his troops and was able to participate later in the battles of Gaines's Mill and Malvern Hill. An account of this escape has been published and one writer maintains that it "reads like a novel" (12). It has been asserted that Sternberg "saw more active service on the battlefield in the Civil War and the Indian Campaigns that followed than any other medical officer of his time. Again and again he conducted himself under fire in the way that we today try to teach young medical officers is their duty and their privilege" (13).

Sternberg contracted typhoid fever at Harrison's landing and was sent north. He served as executive officer of a U.S. Hospital, with 2,200 beds at Portsmouth Grove, R.I., and during the succeeding years was stationed at several places located in various sections of the country. A more detailed list of his assignments is readily available (14). It is worthy of mention, however, that during the Civil War he received brevet commissions of captain and major for faithful and meritorious service. The peace between the states did not put an end to the dangers of a soldierly career, for between 1868 and 1879 he took part in several expeditions against hostile Cheyennes "along the upper Arkansas River in Indian Territory and western Kansas" (15).

It was during the latter years that there might well have been sown the seeds of interest in yellow fever, a disease which was to be the object of extensive investigation. His contacts with yellow fever were frequent, especially at the Barrancas garrison in Florida where he was stationed from 1872-75, and New York and New Orleans during the two preceding years. These experiences, along with similar involvement with the scourge of cholera (during an epidemic of which he lost his first wife at Fort Harker, Kansas, in 1867), proved ample to prompt Dr. George M. Kober's remark, "I do not know of a single medical officer who has faced cholera and yellow fever epidemics as often and courageously as he" (16).

With his personal observations fresh in mind, Sternberg prepared a paper on yellow fever which was published in 1875 in the *New Orleans Medical and Surgical Journal* (17). This has been called "his first publication of scientific value related to the clinical picture of the latter (yellow fever) disease . . . . " (18). Less than two years later, and in the same journal, Sternberg published a paper entitled, "A Study of the Natural History of Yellow Fever" (19). These works laid the foundation for his status as an authority on that disease. Not always was his attention to the malady of an impersonal nature, because in the summer of 1875 he himself came down with the illness and recovered after a severe infection and prolonged convalescence.

War days were not over even in these years, for Sternberg saw service at Fort Walla Walla in Wash-

gton and participated in the Nez Percé campaign of 877. Yet he attended to studies and experiments conscientiously and laid the foundations for future work. He concerned himself with the practical value of disinfectants and in testing germicidal activity he used putrefactive bacteria. When transfers came through he ontinued his work in Washington and at Johns Hopkins University and eventually became chairman of he committee in that field under the American Public Health Association. In 1886 Sternberg was awarded he Lomb prize for his paper, "Disinfection and Individual Prophylaxis against Infectious Diseases," which was translated into several foreign languages (20). His endeavors in the struggle against communicable diseases has been held in high regard and e is considered a pioneer in this type of work. His ccomplishments in the determination of the thermal eath point of various pathogenic organisms and the ermicidal value of chemical and physical agents has een termed a "glorious gain" (21).

An interesting aspect of Sternberg's career was his liscovery of the pneumococcus almost at the same time ut completely apart from Pasteur. This took place in he year 1881 when, while engaged with his experiments, he found this organism to be constant in his own putum. His wife (22) has mentioned February as the nonth during which the discovery took place and she redits Pasteur with priority of publication citing anuary 24, 1881, as the date of his communication o the Academy of Sciences of Paris (23). The pneumococci were capable of producing septicemia in rabbits but neither Sternberg nor Pasteur realized that he organism being studied was associated with lobar neumonia. The investigators Fränkel and Weichselbaum demonstrated that the pneumococcus was the etiological factor in a large majority of cases of lobar neumonia (24), and like Pasteur and Sternberg, these workers published their findings independently of each ther, in 1886 (25).

The question of priority arose not only with the discovery of the pneumococcus but also with the demonstration of the tubercle bacillus. In more than one place t is mentioned that Sternberg was the first to demonstrate the tubercle bacillus in this country (26, 27). Only recently (28) it was indicated that Belfield and Gradle "were among the first, if not the very first" to offer adequate demonstration of the tubercle bacillus n the United States and it was stressed that the book which each wrote is one of the earliest published in the English language dealing with the relations of microorganisms to disease. This source also refers to Mrs. Sternberg's biography of her husband and comments on the error she made of citing the year 1881 as the year in which he demonstrated and photographed the tubercle bacillus discovered by Koch. Koch isolated the tubercle bacillus in the year 1882 (29). But as regards priority, it would be only fair to point out that Mrs. Sternberg specifically stated that she was "informed on good authority" (30) that this was the first demonstration of the organism in America. It is worthy of mention that this event took place at Fort Mason where Sternberg established at his own expense a laboratory for biological research (31).

In his desire for work and accomplishment it is, perhaps, not surprising that Sternberg did not hesitate to supply funds from his personal savings to inaugurate and maintain a high standard of medical service at his various stations. It is, therefore, not surprising that General McCaw stated at the dinner commemorating Sternberg's seventieth birthday, "I believe that his greatest service was that he always fostered and directly inculcated a scientific spirit in his corps" (32, 33). And as Hume (34) has written, "He had the power of drawing men about him and of bringing out their best. This, added to his own keen intellect and initiative, made Sternberg one of America's great men of science and one of the most distinguished holders of the office of Surgeon General of the Army."

Among other diseases, Sternberg participated in a study of typhoid fever and on reassignment to New York in the spring of 1892 (35) he worked to help check an epidemic of the disease at Madison Barracks by improving methods of sanitation and insuring a pure water supply. It is interesting to note that no mention at all was made of this in an attractive brief history of the border post that was published recently (36).

It has been mentioned (37) that the Metchnikoff theory of the rôle of leucocytes as defenders of the body against invasion by pathogenic organisms was first introduced by Sternberg in 1881, a number of years before the first paper of Metchnikoff appeared. Sternberg supposedly suggested that the leucocytes exerted an ameboid action in eliminating obstructing organic and inorganic particles and that by means of this action, bacterial protoplasm may likewise be reduced so that the possibilities of the bacteria exerting any harm would be thwarted. Although the aforementioned reference cites 1894 as the date of Metchnikoff's paper, another reference (38) gives 1892 as the date of Metchnikoff's demonstration and refers to his monograph (39) which was apparently dated 1893. In this work, Metchnikoff demonstrated that the reaction of wandering mesodermal cells against the irritant was the essential factor in inflammation. These cells are contained predominantly in the blood stream of higher animals and constitute the blood leucocytes. "The object and meaning of the vascular phenomena is to bring these mesodermal defense cells from the interior of the vessels to the outside where they can meet and cope with the irritant" (40). It is justifiable to call attention to the fact that Metchnikoff did a great deal of work on this subject and full details may be obtained from his great publication with ample references to it cited in Boyd's textbook. Sternberg probably deserves credit only for possessing a similar conception of the process but he did not enlarge upon his views to a degree obtained by Metchnikoff and his work in this field was by no means as extensive.

A sincerely hard worker, Sternberg kept a vigilant eye on the latest medical developments here and abroad. During the 1880's he was stationed in Baltimore as an examiner of recruits and, conscientiously furthering himself, he was by 1885 working in Dr. Welch's laboratory while the Johns Hopkins Medical School was being organized. Along with him were Franklin P. Mall, Councilman, Halstead, Abbott, Bolton, Flexner, Booker, and Walter Reed (41). Thus it is not surprising that he was among the earliest to demonstrate the malarial plasmodium of Laveran.

In 1880 Alphonse Laveran, a French Army surgeon stationed in Algiers, found pigmented bodies in blood

cells of malaria cases and reported it to the Academy of Science in Paris. The Italians paid ample attention to this, but the Americans did not until the time of Councilman's work in Welch's laboratory in Baltimore, where there existed a great deal of malaria (42). In Washington, on June 17 and 18, 1886, there was held an inaugural meeting of the Association of American Physicians. At that meeting William Osler, who was skeptical of Laveran's claims, mentioned having examined the blood of six patients in three of whom he had seen the ameboid bodies but he believed they were nothing more than cell vacuoles. Even Councilman doubted that they represented the cause or effect of malaria, but Sternberg, who was present at the meeting, warmly upheld the work of Laveran, and he and Councilman indicated that if Osler's preparations had been stained he would have realized that he was dealing with actual organisms.

Sternberg has also been credited with being the first to demonstrate the plasmodium of malaria in this country (43, 44). Five years before this inaugural meeting took place he had been sent to New Orleans by the National Board of Health to study malaria and at that time he proved the Bacillus malariæ of Klebs and Tommasi-Crudeli was not the etiological factor in the causation of malaria. In 1885 on his return from the International Sanitary Conference in Rome, Sternberg showed for the first time in the United States the plasmodium of Laveran in freshly drawn blood from a malarial patient. This was demonstrated in Dr. Welch's laboratory where Surgeon General Murray had allowed him time for research (45).

Numerous additional achievements mark Sternberg's career and serve to indicate his resourcefulness, initiative, scholarship, and ability. He perfected an anemometer and in 1870 patented a heat regulator. He experimented with photomicrography and became highly efficient in its use. The excellent facilities of the Army Medical Museum for photomicrography apparently date back to Surgeon General Sternberg's support when this work was still in its infancy (46). Sternberg published a monograph on the subject in 1883 (47).

Following his initial studies and impressions of yellow fever, Sternberg was ordered to Washington, D.C., in April 1879, and assigned to duty with the Havana Yellow Fever Commission. While at work with this group he had occasion to visit many cities and sections including Rio de Janeiro and Vera Cruz and his studies brought him in contact with Dr. Stanford Chaillé of New Orleans and Dr. Juan Guiteras of Havana (48). As a result of a division of the project, Sternberg was concerned mostly with the problems dealing with the nature and natural history of the cause of the disease. Consequently he had ample opportunity for microscopical examination of blood and tissues of yellow fever patients and he was one of the first to use the new process of photomicrography in which he developed great efficiency (49). During the months he spent in Havana he was associated with the renowned Dr. Carlos Juan Finlay who had been an ardent proponent of the theory that yellow fever was transmitted by the mosquito. In the course of his investigations Sternberg ruled out the etiological responsibility of the previously proposed Cryptococcus xanthogenicus of Domingos Freire of Brazil, Bacillus leporis lethalis of Gibier, Micrococcus tetragenus of Finlay, Bacillus acidiformans, Bacillus cuniculicida havaniensis, and others (50). With its work completed the Commission concluded that the cause of the disease was unknown and must await further study. As has been quoted elsewhere (51), Sternberg wrote in his textbook (52), "The specific infectious agent in yellow fever may belong to an entirely different class of microorganisms from the bacteria, or it may be ultramicroscopic and not capable of demonstration in the tissues by staining methods usually employed by bacteriologists."

But Sternberg's contact with the yellow fever problem was not over by any means. He had already been in office as Surgeon General of the Army for a few years when the Spanish American War broke out and the scourge of the tropics took a heavy toll among the troops. Very soon after the declaration of war Sternberg had issued his Circular No. I in which he wrote "The result of the campaign may depend upon the sanitary measures adopted or neglected by the commanding generals of the armies in the field. The medical officer is responsible for proper recommendations relating to the protection of the health of troops in the camp or in garrison" (53).

And in 1900 it was Sternberg who sponsored the yellow fever commission under the immortal Major Walter Reed. At that time he suggested "that if the blood of a yellow fever patient contain the specific infectious agent, this might be shown by inoculating a nonimmune individual with such blood" (54). He also mentioned the possibility of an intermediary host in the transmission of the disease from man to man. When the commission began to function it was Sanarelli's Bacillus icteroides that was attracting the greatest attention as the cause of yellow fever and supposedly this had been confirmed by two officers of the Marine Hospital Service (55). Sternberg opposed this claim.

There can be no doubt that Sternberg's work on yellow fever was fundamental and highly significant in paving the way for final conquest of the mystery of its etiology. His investigations were invaluable in disproving false assertions, thus eliminating a vast amount of unnecessary and obstructive activity by the Reed Commission. He rightly deserves a share in the glory of the conquest of yellow fever. It has been pointed out by General Gorgas that were the commission's work to have been unsuccessful, Sternberg would have received the blame, and highly complimentary words have been spoken of Sternberg in recognition of his importance by Admiral Stitt, Dr. William Welch, Sir William Osler, and Secretary of War Elihu Root (55). The latter expressed the opinion that Reed's work was made possible by the liberal policies of General Sternberg's administration.

Through the years of his army career, Sternberg gradually earned his promotions. In 1866 he was made a captain, in 1875 a major, and in 1891 he was appointed a lieutenant-colonel (57). He had received the brevet of lieutenant-colonel several years before, in 1887, when he was not yet forty years old, for distinguished service under fire at the battle of Clearwater, Idaho, in the campaign against the Nez Percés Indians (58). But the peak of his military career was reached in 1893 when he was appointed to the coveted position of Surgeon General of the Army. It was on May 30, 1893, that Sternberg received a telegram in-

rming him of his appointment. He was in New York the time and he hurried to Brooklyn to inform his fe of the news. Evidently she was not at home and he rried to the Hoagland Laboratory (59). There, he und her busy at her microscope and she permitted m to inform her of his new success although she herlf had been notified independently of the appointent a short time before his arrival. According to her ory, he was silent on the way home and when they ere finally alone, he said, "I do not know whether I n happy or not. I face great responsibilities and it is ot an easy matter to satisfy everybody, and when I ake one man happy by recognizing his ability there ill be many others disappointed and disgruntled, so I arcely know if I am to be congratulated or not. But know the Medical Corps and am proud of it. I have o family and I shall consider the medical officers my mily and will give every man a chance. I shall enavor to promote a truly scientific spirit in the Corps nd where I recognize special ability, I will do all I an to aid the respective officer to achieve success" (60).

Sternberg received many letters of congratulation n his new appointment and one of these addressed to im by William Osler scores two achievements. Dated une 29, 1893, it reads: "Dear Dr. Sternberg: Though ate, let me offer you my sincere congratulations on our promotion to the Surgeon-Generalship. I had oped before this to be able to call and offer them in erson. I see by this morning's paper that you have rganized your Army Medical School, and I am deghted to see that you have appointed Dr. Reed to ne of the chairs" (61).

Sternberg may properly be considered a great urgeon General and his high standing as a scientist as never been questioned. However, opinions differ bout his administrative capabilities. Any deficiency hich he might have possessed in regard to the latter as sufficiently counterbalanced by his scientific atainments and constructive contributions to the Army Medical Department specifically.

Lieutenant-Colonel W. C. Borden, retired, is said to ave quoted Major Greenleaf of the Surgeon General's ffice as saying, before Sternberg's appointment, "Look t Sternberg, over there in New York, spending all his ime with a microscope. Can you tell me one earthly it of good Sternberg is to the Medical Corps?" Later n, Sternberg was appointed to the Surgeon Generalhip over Greenleaf (62). The author supplying this nformation has called Sternberg " . . . . the most minent man, professionally, in the Corps" (63). Hume as written that there was agreement among officers ho knew Sternberg intimately that in addition to vidence of "administrative genius," he was a successful surgeon general because he always considered imself a personal representative in Washington of the fficers of his Corps.

Ashburn (64) has pointed out that when Sternberg eceived his appointment he was the greatest and most roductive man in bacteriology in America. (Robert Koch had already acclaimed Sternberg the "father of merican bacteriology") (65). Ashburn concedes that reenleaf would probably have been a more able dministrator but advises that at that time the Medical orps was considered to be less in need of an administrator than a medical man and scientist, which position ternberg readily fulfilled. It seems that Sternberg accelerated the rate of advancement of the Medical Corps in medical accomplishments although the Corps was not lagging behind the remainder of the medical profession at the time. Sternberg, as the symbol of the new advances in science and medicine, was the proper man for the position.

Unfortunately the Spanish American War imposed an almost insurmountable difficulty upon the Surgeon General and the failings of the Medical Department during that war are discussed at length in a larger work (66). The report of the Dodge Commission regarding conclusions and recommendations for the Medical Department is also supplied. Ashburn has written, " . . . he was not a great organizer; did not know how to shift work to others, and so free himself from harassing details. His scientific attainments did not aid him in the administration of his suddenly expanded job. He was also part of an obsolete and incompetent system. No man could have held the position at that time and have come through the war in it with more respect than did Sternberg" (67).

One of the most important acts during Sternberg's tenure of office as Surgeon General was the creation of the Army Medical School in 1893 (68). This was the first of the Army's Special Service Schools and is said to be America's oldest school of public health and preventive medicine (69). In his annual report for 1894, Sternberg asserted that the school would not add to the expenses of the Army. Lecture rooms could be supplied by the building provided by Congress for the Library and Museum. Material for bacteriological and chemical study could be provided by the Army Medical Museum. Medical officers already on duty in Washington could be utilized on the faculty. Facilities for drill instruction, administration, first aid, and battlefield management were provided by the transfer of the Hospital Corps company from Fort D. A. Russell, Wyoming, to Washington Barracks (70). Ashburn (71) lists the first faculty of the school as follows: Colonel Charles H. Alden, president of faculty and lecturer on duties of medical officers; Lieutenant Colonel William H. Forwood, professor of military surgery; Major John S. Billings, professor of military hygiene; Captain Walter Reed, professor of clinical and sanitary microscopy and director of the pathological laboratory; Captain Julian M. Cabell, instructor in hospital corps drill. Additional lecturers, not on the faculty were: Surgeon General Sternberg, nine lectures on bacteriology; Major G. B. Davis, Judge Advocate, five lectures on military law; Captain J. C. Merrill, M.D., U.S.A., three lectures on comparative anatomy; Dr. Robert Fletcher, four lectures on medical jurisprudence; Dr. C. W. Stiles, two lectures on parasites in man; Dr. W. W. Keen, one lecture on head surgery.

Eventually the Army Medical School obtained its own building in the Army Medical Center and is now a center of scientific research and instruction.

On the request of Surgeon General Sternberg, William Osler addressed the students of the Army Medical School in February 1894 (72). In this address he pointed out the advantages of an Army medical career and indicated its differences from civilian practice. He mentioned some outstanding members of the Corps and their achievements, dwelling particularly on the world famous William Beaumont and his experiments on digestion (73). *(To be continued)*

HISTORY OF SPIDER BITES*

The Ancient Aspect of the Disease and Its Therapy

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Indian literature gives us one of the earliest known descriptions of the spider's bite and the nature of the syndrome. In order to be fully acquainted with the disease, one must be acquainted with the three savants of Indian medicine, Atreya, Susruta, and Vagbhata the Elder.

Atreya (1) is said to have had six pupils, two of whom submitted his writings in the form of a *Samhita* or compendium. At present, no more than two of them are known to us: the Compendium of Agnevesa and of Bheda (Bhela). Of these two, the copy of Bheda remains while the Agnevesa Compendium survived only until the 11th century, when it was quoted by the commentator, Chakrapnidaha. To date, this copy undertaken by a Kashmir physician called Charaka remains in a depleted form.

Susruta (1), the second of these savants, was the surgeon. He too wrote a compendium, and an unknown author added minor surgery to it, called *Uhara-Tantra*. Both works are spoken of as the *Susruta Samhita* (*Susruta Compendium*). In order to differentiate between the two, the originator is called Susruta the Elder, and the unknown author is known as Susruta II.

Vagbhata I was the last of these savants. He wrote the compendium of General Medicine which was similar to the supplemental Samhita of Susruta. The compendium was divided into six sections (*Sthana*) called "Summary of the Octopartite Science" (astanga samgratta).

There is a dispute as to the exact period in which these three men lived. Bhisagacarya (2) says that Susruta lived about 1000 B.C. Hoernle (1) asserts that Susruta lived about 600 B.C. Atreya (1, 2) either was born prior to Susruta or was his contemporary. Vagbhata I (1) knew the compendia of Charaka and Susruta. He referred to both and utilized their works. Vagbhata I (1) may be placed easily in the seventh century, or about 625 A.D. Bhishagratna (3), in a translation of the *Susruta Samhita,* gives a discourse upon spider bites.

Spider Bites (3)

"Cases of Luta (venomous spider bite—poison of a Luta) are the most difficult to diagnose and cure. The diagnosis of such a case puzzles many an experienced physician, while novices in the art of healing find it a difficult matter. In a case of doubt or of conflicting indications pointing equally to both the venomous and the nonvenomous character of the bite, a physician should employ antipoisonous remedies of such character as would not prove hostile (to the natural temperament and vital principles of the patients' systems nor to the course of food and drink they are enjoined to take or take naturally), since the Agadas are applicable only in cases of poisoning and, applied otherwise in healthy nonpoisoned persons, would produce all kinds of discomfort. Hence it is incumbent on a physician to gather conclusive evidence of the poisonous nature of the bite at the very outset. Failure to ascertain the existence of poison proves more fatal in many cases than the bite itself.

Development of Luta Poison

As the first sprouting of a tree does not enable man to ascertain the species correctly, so the poison of a venomous spider in its first stage of incubation in the body does not produce any specific symptoms sufficiently potent to throw any light on its nature, nor does it give any hint as to its correct diagnosis. A spider (Luta) poison, latent in a human organism, is marked by a slight itching sensation at the seat of the bite, as if the poison were shifting from one place to another in that locality, by the presence of Kotha (urticaria) and by an indistinctness of color on the first day of its incubation. On the second day, the seat of the bite becomes swollen and sunk in the middle and the characteristic marks of biting show themselves. On the third day the specific symptoms (fever, shivering, etc.) of the poison of the animal set in. On the fourth day the poison is aggravated. On the fifth day the symptoms and disorders peculiar to its aggravated condition are present. On the sixth day, the poison begins to course through the organism and envelops the Marmas (or the vulnerable parts). On the seventh day the poison is diffused throughout the organism, becomes extremely aggravated and proves fatal.

Potency.—The poison of spiders (Luta) which are acutely and violently venomous proves fatal in the course of a week. That of a middle-poisonous one would take a little more time in order to prove fatal, while the bite by one of the mild-poisonous brings death within a fortnight. Hence a physician should try his best with antivenomous remedies for the complete nullification of the poison immediately after the bite.

Location.—A spider is found to secrete seven kinds of poison through the seven different parts or principles of its body, viz., saliva (Lálá), nails (claws), urine, fangs, ovum (Rajas), fecal matter and semen, and such poison is either keen or mild in its potency, or follows a middle path between the two (keen and mild).

Characteristics of poison according to its seat in the body of the spider.—The Susruta then describes the individual effects of the seven different types of secretion of poison.

Mythological Account of the Origin of Lutá

"Once upon a time, it is said, King Vísvámitra went to the hermitage of the holy Vásishtha and by his actions aroused the wrath of the holy sage. Drops of perspiration were thereupon produced on the forehead of that holy and celestially brilliant sage and trickled down on the stacks of hay culled and gathered (Luna) by the holy sages for the use of the celestial cow, and behold! they (the drops of sweat) were transformed in

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innumerable dreadful and venomous spiders (Lutá), hich, up to this day, are found to infest the articles of yal use for the iniquity of that royal sage (Vísvá-itra). They are called Lutás (spiders) from the fact f their being germinated from the drops of perspira-on of the holy sage Vásishtha fallen on the culled Luna) stacks of hay and they are sixteen in number.

Different Names of Spiders and General Symptoms of Their Bites

The poison of spiders is divided into two classes—urable with difficulty and incurable. Of the sixteen inds of spiders, the bites or poison of eight may be ured with the greatest difficulty, while those of the re-aining eight are incurable. The Tri-mandalá Svetá, Kapitá, Pitiká, Ála-Vishá, Mitra-Vishá, Raktá, and ne Kasaná are the eight species which belong to the rst group. A bite by any of them is attended with an ching pain in the head, pain and itching about the eat of the bite and the symptoms and disorders pe-uliar to the aggravated Váyu and Kapha.

The Sauvarniká, Lája-Varná, Jálini, Eni-padi, Krish-a-varná, Agni varná Kákándá and the Málá-guná be-ng to the second group and their bites are marked by leeding, fever, a burning sensation, dysentery, and dis-rders due to the concerted action of all three deranged Doshas of the body and bitten part putrifies. Eruptions f various sorts and pustules and large circular patches s well as large, soft and shifting swellings, red or rown in color, appear on the skin about the affected art.

Specific Symptoms of Spider-Bites and Their Treatment

The Susruta then describes each individual species of pider and the symptom produced by its bite.

General remedies.—An Agada made of Sârivâ, Uśira, Yashti-Madhu, Chandana, Utpala and Padmaka may e used with advantage in cases of spider bites of all ypes. The bark of Sleshmâkaka and Kshira-pippala hould be deemed equally efficacious in all cases of pider bites and these may be employed in any shape is, as snuff, potion and unguent, etc.

Surgical treatments.—In all cases of the curable type f spider bites, the affected part should at once be cut pen and removed with a Vriddhipatra instrument and ne incisional part should then be cauterized with a red-ot jambvoshtha instrument in the absence of fever or ich like distressing symptoms and in the event of its ot occurring in any of the vulnerable parts of the body Marmas). Any of the (ten-fold) remedial measures of asya (snuff), medicated collyrium, unguents (Abhy-nja), potions (Pána) Dhuma (fumigation), Avapida rm of snuff, gargling, emesis, purging and blood let-ng by the applications of leeches should be adopted a case of spider-bite according to its requirements".

The Chinese (4) considered the black spider as one the "five poisons". The other four are the toad, ake, scorpion, and centipede.

Pliny (23-79 A.D.) in his book (5) makes the fol-wing statement concerning spider bite. "The sting of e spider is more keen and sharpe than that of the espe. It liveth ordinarily about ovens and mils. The st remedies against the pricke of their sting is to pre-nt before the eyes of the patient another spider of the same kind, for which purpose, folke use to keepe them in store, when they find any of them dead."

"There are a set of spiders called Phalangia which are covered all over with a certain down, and if one of them is cut and its bellie ripped, you will find two wormes or grubs, which hinder women from conception if they be knit within a peece of red deere skin and tied to their armes or other parts of their bodie before sunrising, but the virtue continueth not above one year. "Thus have I shewed one reccit only, of all those that keep women from conceiving, which I may be allowed to do in regard of some wives, who being too fruitful and overcharged with child bearing have some reason to play them a while and rest from keming."

Pliny (5) advises, as therapy against the spider bite, "drink in exycrab wine and vinegre mingled together the braines of a cock or hen with a little pepper. Also to take in drinke five Pismures, is thought to bee a singular medicine and withall to make a liniment of sheep mucke ashes, tempered in vinegre and therewith to annoint the grieved place. Moreover the said spiders themselves (of any kind whatsoever) resolved and putrified in vile, serve for the said purpose."

Swammerdam (6), in his *History of Insects,* mentioned the fact that the dart of a tarantula upon occasion causes a peculiar frenzy which some people believe is cured by music. This idea he personally doubts.

Longfellow (7), in *Evangeline,* refers to malaria as being cured by "wearing a spider hung around one's neck in a nutshell".

Spider Bites Today

Today, our armed forces are confronted with the problem of spider bites not only in Continental United States but in Australia, South Africa, Continental Europe, the Balkans, the West Indies, and South America. Especially feared is the genus Latrodectus (8).

Halter and Kuzell (8) have used calcium injections with remarkable relief of the pain, but the calcium chloride injections do not alter the duration of the illness.

Thus, while spider bite poisoning has been known for many thousands of years, we still have not found the panacea, but we do have high hopes of ultimately reaching the cure in the near future.

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SAMUEL HAHNEMANN, FOUNDER OF HOMEOPATHY

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The first stages of homeopathic treatment reach back to ancient times. An extremely strange cure is reported in the Trojan myth. Telephus, king of Mysia, son of Heracles, had been wounded in the left side by Achilles with a spear. The wound would not heal and the king was confined to his bed for years. Even the famous Homeric physicians, Podalirius and Machaon could do no more than relieve his pain.

The king finally sent to an oracle of Apollo and was told that only the spear that inflicted the wound could cure it. Podalirius and Machaon interpreted the mysterious oracle in a peculiar way: they filed off some rust from the spear of Achilles and spread it over the wound. This brought about a complete cure within a short time.

In a way this treatment is similar to the principle of homeopathy: *similia similibus curantur*—let likes be cured by likes; or, as Samuel C. F. Hahnemann, the founder of homeopathy, put it: the curative virtues of a remedy correspond to its disease-producing properties. There are numerous predecessors to homeopathic ideas, starting as far back as Hippocrates, but Hahnemann was the founder of a medical doctrine based on homeopathic principles and we are well justified in calling him the father of homeopathy.

Hippocrates, in the fourth century, B.C., taught that "Disease is produced by influences that are similar to remedies, and disease is cured by remedies which produce similar symptoms." Galen, whose therapeutic methods used to guide the doctors of the Middle Ages, mentions a *similar* too; however, he refers to a different principle.

Many doctrines and opinions of the sixteenth century physician, Aureolus Theophrastus Bombastus von Hohenheim, or Paracelsus, are akin to homeopathic teachings. The identical words, *similia similibus curantur,* occur in the Geneva edition (1658) of the works of Parcelsus, as a marginal heading of one of the paragraphs. The basic conception, however, is not the same, and Hahnemann himself objected to being compared to Paracelsus. The booklet of La Bruguière, *De curatione per similia,* published in 1734, has little connection with the homeopathic law of similars. Much more important are the ideas of the Vienna court physician, Anton Stoerck (1731-1803), on simile and the necessity of testing drugs on a healthy person, the importance of which was almost unknown at that time.

Samuel Hahnemann was born in Meissen, Saxony, in 1755. He studied medicine at Leipzig and Vienna and took his degree in 1779 at Erlangen. He wrote a dictionary for apothecaries, published pamphlets on arsenic poisonings and venereal diseases for which he recommended a new soluble mercury preparation (mercurius solubilis Hahnemanni). He practiced first in Dresden, then settled in Leipzig. He was not satisfied with the state of medical science and gave vehement expression to his revolutionary ideas. The hostility of the apothecaries forced him to leave Leipzig and find protection with Duke Ferdinand of Anhalt-Koethen. For many years he lived in Koethen where he was appointed court physician and *Hofrat* by the duke.

In 1796, basic publication "Versuch über ein neue Prinzip zur Auffindung der Heilkraft in Arzneisub stanzen" appeared in Hufeland's *Journal*. It is still th basis of the homeopathic doctrine. Hufeland was highly renowned and leading physician of his time professor of medicine at the universities of Jena an Berlin. Although a leading member of the socalle regular profession, he was unsually accessible to ne ideas in medicine. Hahnemann declared that afte eight years' practice he had become so much aware c the delusive nature of ordinary methods of treatmen that he felt compelled to relinquish practice.

Hahnemann, to make a living, translated medica publications in different languages. While he was trans lating the Scotch physician Cullen's *Materia Medic* into German, he meditated on Cullen's observation o cinchona bark. Cullen had mentioned that cinchon bark, the chief remedy against intermittent fever, pro duced symptoms in the healthy body similar to inter mittent fever. Cullen's explanation of this fact did no satisfy Hahnemann, and he tried the effects of thi drug on himself, as well as on other persons, and fu was always able to produce the symptoms of the dis ease with the curative drug. He extended his experi ments to other remedies, and found his conjecture well confirmed that drugs satisfactorily cured disease similar to those produced by their action on healthy individuals.

Starting from these observations, Hahnemann buil his new system of medicine and therapy which found strongest opposition in medical as well as pharmaceu tical circles and which he defended in a very roug manner especially while he was a teacher at the Uni versity of Leipzig. He did not even spare his pupil and followers and what he contemptuously called half homeopaths.

Adventure characterized the last few years of th aged Hahnemann. Shortly before his eightieth birth day, he married a former patient of his, a wealthy French woman of some thirty years, and without an previous notice to his friends the *Homeopathic Archiv* of 1835 brought out the short, but enlightening notice "Herr Hofrat Hahnemann ist nebst Gemahlin am 14 Juni nach Paris gefahren"—Hofrat and Mrs. Hahne mann left Koethen for Paris on June 14th.

In Paris he was celebrated as he never had been i Germany. His daughter had returned to him all th records and registers of symptoms that he had give to her, and he started, notwithstanding his eight years, a big practice in the French capital. His offic was in a palatial establishment with huge suites o waiting rooms filled with statues and paintings of him self. So numerous were his patients that their carriage rolled in slow procession all day long for blocks arou his mansion, and three servants led the patients int the waiting rooms.

Mrs. Hahnemann worked as his indispensable sec retary; she was, although not a doctor, trained by him to carry on his work. His income was about two hun dred thousands francs a year, but he treated many pa

nts without any fee. He died in Paris, on July 2, 1843, the age of eighty-eight years. At the time of his ath he had followers in many countries. In 1825 meopathy had already spread to the United States ere it flourished especially among the Pennsylvania rmans. Today about ten thousand to fifteen thou- nd physicians in the United States have homeopathic aining. Monuments have been erected to Hahne- ann's memory, at Leipzig, at Koethen and in other cities.

The term homeopathy was formed by Hahnemann. originates from the Greek homoios=similar and thos=disease. It is supposed to express the law of milars. Allopathy or alleopathy (from alloios=differ- t), on the other hand, is a form of treatment which eks to cure disease by producing a condition of the stem which is either different from or opposite to the ndition essential to the existing disease, e.g., opium r continuous pain.

Isopathy (isos=alike), a variety of homeopathy, eks to treat disease with the disease-producing agent self, for example, treating tuberculosis of the lungs offering tuberculous sputum, or treating tapeworm material extracted from tapeworms. Hahnemann tacked vehemently the isopath Gross. The more re- nt term homeotherapy, instead of homeopathy, em- hasizes that this special kind of medical theory is more ncerned with treating the sick than with diagnosis.

In contrast to the prevalent medical conception of is time, *contraria contrariis,* Hahnemann set up the ndamental rule, *similia similibus*. Exposure to cold treated with cold, by rubbing with snow, not with eat. By the same token, for burns the use of heat is nsidered soothing and healing. Smallpox, according Hahnemann, may result in deafness and blindness, ut smallpox also has cured both these ailments. High ver may produce mental disturbances, but may cure em too—an opinion which is popular today in the eatment of dementia paralytica and other mental dis- ases by intentional production of artificial fever.

Many drugs were tested to prove the truth of the law f similars. Large doses of cantharides and oil of tur- entine will produce inflammation of the kidneys and e urinary tract, while small doses are used for the eatment of these ailments. Large doses of coffee will roduce headache while small doses will cure them. A rge amount of iodine may produce irritation of the sal mucosa while a tiny amount dispels it. Continued se of arsenic results in eczema and other skin trouble hile small amounts are used for its treatment. Nux mica paralyzes the chest muscles; Hahnemann gave s patients tiny doses to check asthma. Arnica, which overdoses brought on colics, was used by him in nall doses to cure diarrhea. Large doses of sulphur ay produce eczemas and furunculosis, small doses are highly appraised remedy for furunculosis. Small nounts of drugs are considered stimulating and heal- g, large doses to be destructive.

Painful, disgusting and even harmful remedies were ry common in those days: drastic blood letting for tacks of fever, exaggerated doses of laudanum, cal- nel and ipecac. This Hahnemann tried to avoid, and ortly found himself in violent opposition to prevail- g medical practices.

An important demand of homeopathy is that drug tion is confirmed first by provings upon healthy hu- an individuals. Hahnemann was repeatedly able to produce symptoms of intermittent fever in himself dur- ing his self-trials with cinchona bark. Before Hahne- mann, Albrecht von Haller (1771) had insisted that drugs should be tested on the healthy individual, and that only one remedy should be administered at a time; he is quoted expressly by Hahnemann in his chief work, *The Organon of the Art of Healing* (1810).

In extended methodical series of investigation homeopathic research workers have examined more than a thousand drugs in this way. The results are laid down in the homeopathic materia medica, they are the basis for homeopathic treatment. Another fundamental rule of this treatment is that drugs must be administered in doses sufficiently small so as not to produce too great an aggravation of the existing or natural disease.

Hahnemann got much opposition on his rule of small "homeopathic" doses. His aim was to cure the patients "as quickly, safely and pleasantly as possible." The proper small dose—just large enough to arouse the diseased cells to healthful activity—is the one which fulfills this aim without creating an unnecessarily violent drug disease. Over the question of dose even the members of the homeopathic school are divided. Many employ low potencies, i.e., mother tincture, first dilution (relation 1:9), second, sixth, etc., dilution, while others use hundred-thousandth and millionth dilutions.

Some other works of Hahnemann are: *Fragmenta de viribus medicamentorum positivis,"* in two volumes; six volumes of *Materia Medica, Reine Arzneimittellehre* in which he detailed the symptoms produced by "proving" a large number of drugs by administering them to healthy subjects; four volumes on chronic diseases, and numerous smaller publications.

Hahnemann shared the fate of every founder and discoverer: to be worshipped as genius and hero by his friends and followers, and to be ridiculed as charlatan and fool by his adversaries. An aura of quackery surrounded homeopathy for long decades, it prevented respectable doctors from any actual interest in or use of the homeopathic method. The Swedish chemist and pharmacologist, Berzelius, said of Hahnemann: "That man would have been a great chemist, if he had not been a great quack."

Modern conception does much more justice to Hahnemann. We can scarcely now estimate the force of character and of courage which was implied in his abandoning the common lines of medicine and braving the wrath of intolerant confrères. With his law of similars, and his minuscule doses, not only homeopaths claim that Hahnemann anticipated the principle of vaccination, but even a convinced alleopath like Emil von Behring has stated that the use of vaccines is basically a homeopathic method. And it is impossible to forget the words of Osler: "No individual has done more good to the medical profession than Samuel Hahnemann."

Today, official medicine is tolerant enough to permit testing and rechecking of all methods of treatment wherever they may have originated. But when about the middle of the last century, Professor Rapp, then director of the Medical Clinic at the University of Tuebingen, had dared to test the principles of homeopathy and had come to certain positive results, he was compelled to resign his academic job. In 1925, the internationally famous Berlin surgeon, August Bier, published a series of articles in which he took sides with homeopathy. This caused a sensation.

Editorials

Night Blindness and Glare Blindness

Vitamin A is an important vitamin. Its absence is responsible for atrophy of epithelial tissues, and also for the occurrence of night blindness and glare blindness. Hemeralopia or a decreased ability for dark adaptation is the earliest symptom or sign of this deficiency. Dark adaptation of the subnormal kind occurs more or less frequently in seemingly healthy persons. It can be measured photometrically and is greatly improved by vitamin A treatment. There is no need to stress the menace to the public of night blindness. Many traffic accidents are caused by this deficiency.

The evidence that glare blindness is due to the absence or insufficiency of vitamin A is not so conclusive or clear as that pointing to this deficiency as the cause of night blindness. Those who have made an intensive study of the part played by vitamin A in dark adaptation, have elucidated this problem. The rods of the retina are sensitive only to intensity of light and are especially adapted to function in dim light. These contain visual purple, rhodopsin, which is converted by light into visual yellow with vitiation of nerve impulses. In absence of light, visual yellow returns into visual purple. The latter is a conjugated protein into which vitamin A is the prosthetic. In deficiency of the vitamin there is a decreased amount of visual purple and night blindness results. Those who are subject to night blindness or glare blindness or upon photometrical examination exhibit deficient dark adaptation, should be treated by vitamin A.

The Etiology of Gout

The etiology of many diseases is confused, because they are mostly of multiple pathology. The majority of authorities agree that gout is hereditary, while some hedge by affirming that heredity may play a great part in its origin. A great student of rheumatism and gout was the late Llewellyn Jones Llewellyn, whose text book on the subject was perhaps the best ever written. He held the pathological basis of gout resided in a tendency to cellular sensitization. This might remain latent, but, once established, it would explode, when coming in contact with the related protein or antigen. Such explosion takes the form of vascular endothelial poisoning and as this operates through the medium of local ischemia and venous stasis, it is not surprising that the clinical manifestations should be extremely diverse, as symptoms will naturally vary with the regional distribution of the circulatory stasis, and the structure and function of the organ or tissue implicated. If situated in a joint it results in regular gout; if in the lung, asthma; if in the skin, urticaria or eczematous eruptions, irregular gout. Thus, if we accept cellular sensitization as the basal pathological change in gout, and that the malign effects are achieved through vascular endothelial poisoning, we seem to glimpse the inward meaning of the clinical mosaic presented by the regular and irregular manifestations of gout.

Lastly, Llewellyn suggested that skin protein tests if applied to the gouty, might yield as rich a harvest of information as has already been gleaned in asthma. Might not the withdrawal of the offending protein, whether vegetable, animal or bacterial, prove as prophylactic in the one as in the other? Might not our sheet anchor, colchicine, even act as a desensitizer? He concludes that gout is purely hereditary and that tendency to cellular sensitization is the pathological groundwork of the disorder. Gout, he believes, is evoked by the corresponding protein or antigen, vegetable, bacterial or other, and that it exerts its effect through the medium of vascular endothelial poisoning, with muscle tonus, especially of the bronchioles, which finds its clinical expression in the regular and so-called irregular manifestations of gout, arthropathies, eczema, urticaria, asthma, and so on.

Tropical Diseases In Our Midst

There has always been a certain feeling of security in the United States regarding our immunity to tropical diseases. In the days of sailing ships, when we knew much less about medicine than we do today, a considerable number of socalled tropical ailments were found in many of our larger communities, especially in port cities. We have recently been getting increasingly numerous reports on the presence of typical tropical diseases which have been brought back by our overseas forces who are returning from service in many tropical countries, both in Asia and Europe. Of course, we can look upon the incidence of tropical diseases among the returned men as casualties of the war. This is an easy way to dismiss the whole subject, but, unfortunately, many cases of tropical diseases, contracted in this country through indirect contact with the men who have returned from overseas, have remained incorrectly diagnosed for a considerable period of time, because our physicians have had little experience in the recognition and treatment of tropical diseases.

It is no small order to acquaint the medical men who remain in civilian practice with the complex field of tropical diseases. We all know how busy the average practitioner is—perhaps busy is a mild word for the pressure they are under—for they are now handling anywhere from twenty-five to one hundred percent more patients than they did before the war.

In Tulane University and one or two other schools a series of excellent courses are being given in tropical medicine, but relatively few medical men are able to attend these courses.

No doubt we will remain firmly intrenched in many

of the far eastern parts of the world as outposts of protection to our country and we should have medical men in those countries who are well versed in the proper handling of diseases which are prevalent in such tropical places. We have a firm belief that these so-called tropical ailments will be increasingly prevalent in our country.

In view of the foregoing problems it seems logical to us that the average medical practitioner should become better acquainted with the diagnosis and treatment of tropical diseases. Some way should be devised for the men in practice to receive information on these subjects through the medical literature and through other publications which will give them brief, concise data of what they may expect to find in conditions which at present are quite different from what they encounter in their daily practice. It is also imperative that medical schools add courses which will give their students a working knowledge of the diagnosis and care of tropical diseases.

Tuberculosis in Relation to Genius

Many great men and some great women who were tuberculous have done wonderful work. Indeed, a surprisingly large number of individuals who have contributed to progress in science, literature, art and music have been victims of pulmonary tuberculosis. This does not mean that tuberculosis is very frequently akin to genius. It is probable, as the late Dr. Charles H. Mayo pointed out, in an introduction to *Fighters of Fate*, a record of some men and women who have achieved greatly despite the handicap of tuberculosis, that the proportion of great men among the tuberculous is no greater than among the nontuberculous. He further drew attention to the fact that many poisons have a stimulating effect on mental processes and that almost any infection may produce delirium, which is mental stimulation carried to its extreme. And again, sentiment calls attention especially to a genius who does his original output under the stimulus of tuberculosis.

However, it is well known that many great deeds have emanated from the brains of geniuses by the imperative urge of this disease. Another point may be mentioned, namely, that most of the consumptive men and women of genius have been literary or artistic. Science has had some. In medical science, Xavier Bichat shone with the brightest light. Consumptives have not been so numerous among inventive geniuses, at any rate, less has been heard of them, but, as said before, sentiment has had much to do with the fame of writers and artists who have been doomed to an early death by tuberculosis.

The list of consumptives who have made a great name in the world as writers or artists is long. Among these were Paganini, that master of the violin; Schiller, the German army surgeon and great playwright; Laennic, the French medical man who invented the stethoscope; Keats, the poet; Chopin, the aristocrat of music; Dostoievsky, perhaps the world's greatest analytical writer; Emily Bronte, an undeveloped genius, and Aubrey Beardsley with whom the following brief account will deal.

Beardsley, twenty-five years old when he died, did his main work during the last five years of his life. He worked with the fevered activity of one who knew well that he had not long to live, and his sheer imaginative work was marvelous. At the very beginning of his artistic career he had a severe hemorrhage and such attacks recurred throughout his five years of creative outpouring. From twenty to twenty-one, medievalism and hair-line Japanesques and the illustrations of *Le Morte d' Arthur*, the *Bons Mots* and *Salome* were the result.

From the age of twenty-one to twenty-three, appeared the *Yellow Book* which made Beardsley notorious, and he created a decorative style of craftsmanship with which to do his share of the work. It was the publication of the *Yellow Book* that absolutely thrust Beardsley into the public eye. From twenty-three to twenty-four was Beardsley's great period, when a magazine named the *Savoy* was brought out, in the drawings for which Beardsley excelled himself and the aquatintesque essays in wash and line. Whistler said of the *Rape of the Lock* that it proved him, and the world acknowledged it, a great artist. *Volpone* was the last work of his hand, and it was still unfinished when he passed away.

In a brief five years Beardsley built for himself a monument more lasting than brass. The end came when his skilled fingers could not respond to his inspired spirit. The fingers could not hold the pencil and *finis* was written to the works of a superb artist. Beardsley was unique in design and performance. Without training he evolved from his fertile brain a series of drawings which are without parallel in the history of art, and accomplished in five years, in pain of body and travail of spirit, work which will live as long as civilization exists. He was the typical example of a consumptive genius.

News Items

Samuel Gross Prize.—The Philadelphia Academy of Surgery announces that the Samuel D. Gross Prize of $1,500 will be available this year. As stipulated by the late Dr. Samuel D. Gross, the prize is awarded "every five years to the writer of the best original essay, not exceeding 150 pages, octavo, in length, illustrative of some subject in surgical pathology or surgical practice found upon original investigations, the candidates for the prize to be American citizens." The essays must be sent to the Academy, in care of the Philadelphia College of Physicians, on or before Jan. 1, 1945.

Gold Headed Cane Awarded to Dr. Hektoen.—Dr. Ludvig Hektoen, executive director of the National Advisory Cancer Council of the U. S. Public Health Service has been awarded the gold headed cane of the American Association of Pathologists and Bacteriologists in recognition of his distinguished service to pathology and his unselfish devotion to the highest ideals of the profession.

School of Public Health in the University of California.—A School of Public Health has been established in the University of California, Berkeley. Dr. Walter H. Brown, chairman of the department of hygiene, has been appointed acting dean. Dr. Brown announced that the first official activity of the school would be a special training course for sanitarians to meet the needs of the state department of public health in the war emergency.

Staff Appointments at Hospital for Joint Diseases.—The Hospital for Joint Diseases announces twelve places to be filled on the general rotating internship service of the hospital: Four interns to begin October 1, 1944 and eight interns to begin July 1, 1945. For further information in regard to this service and application blanks address the director of the hospital, 1919 Madison Avenue, New York 35, N.Y.

Endowment for Meharry Medical College.—A grant of $4,300,000 was recently made by the General Education Board of the Rockefeller Foundation to Meharry Medical College, Nashville, Tenn. Of this sum $4,000,000 is to be used for an endowment fund and the remaining $300,000 will constitute a contingent fund to be used until the endowment can yield an income.

Foundation for Experimental Biology.—The Worcester Foundation for Experimental Biology has recently been organized, according to the *J.A.M.A.* The foundation is interested in the general physiology and biochemistry of the hormones and respiratory enzymes and their possible interrelations. It is also concerned with applications of such work to studies of psychomotor fatigue.

More Lactose for Penicillin Producers.—The Office of War Information announced on May 18th that steps taken by the War Food Administration in cooperation with producers to avert a threatened shortage of lactose will result in a 1944 lactose production double that of previous years. Present estimates of the War Production Board indicate that penicillin manufacturers will need six to seven million pounds annually, the figure approximating the entire yearly production of lactose during previous years.

Electron Microscope.—A new-desk size electron miscroscope for use in smaller laboratories has been introduced by the Radio Corporation of America. This new instrument, fifty times more powerful than the ordinary optical microscope, makes possible useful magnifications of disease organisms, chemical compounds and other minute particles of matter up to one hundred thousand times. It is simplified in design and costs much less than the larger instrument. It is expected to find wide application in industrial laboratories, schools, hospitals, and particularly in factories for process and material control. The electron microscope was shown for the first time before the Society of American Bacteriologists, at a meeting held in New York on May 5th.

Personal.—Dr. Anthony Bassler, New York, gave a dinner on May 9th to one hundred members of the Medical Society of the State of New York during the annual convention. Captain French R. Moore, U.S.N., the guest of honor, described his war experiences in the Far East, and the new film on amebiasis, produced under the auspices of the National Gastroenterological Association, was shown. Dr. Bassler also read a paper on sigmoiditis at a meeting of the Section on Gastroenterology and Proctology.

Dr. Hugh Stott Taylor has been appointed dean of the Graduate School of Princeton University, to succeed Dr. Luther P. Eisenhart, whose duties made it necessary for him to retire. The appointment of Dr. Taylor will become effective on July 1st.

Dr. Henry H. Ritter, of New York, read an interesting paper on the treatment of hand infections at a meeting of the Clinical Society of the Reconstruction Hospital, New York, on May 17th.

Dr. Torald H. Sollmann will retire on June 30th as dean of the School of Medicine and head of the department of pharmacology, Western Reserve University, Cleveland. Dr. Sollmann, who reached the retirement age of seventy last February, has been on the staff of the Western Reserve Medical School for almost fifty years. Dr. Arnold D. Welch, research director of Sharp and Dohme, Philadelphia, has been appointed head of the department of pharmacology to succeed Dr. Sollmann.

Dr. Loyal Davis, professor of surgery at Northwestern University Medical School, Chicago, delivered the annual Walter L. Niles Memorial Lecture on May 18th, at the Cornell University Medical College Auditorium. His subject was "Experiences as Consultant in Neurological Surgery in European Theater of Operations".

Dr. Maud Slye, associate professor of pathology, University of Chicago School of Medicine since 1926, will retire on July 1st.

Dr. George K. Strode, associate director of the International Health Division of the Rockefeller Foundation, in charge of the division's work in Europe, has been appointed director to succeed Dr. Wilbur A. Sawyer, whose resignation becomes effective on September 1st.

Dr. Charles R. Drew, assistant professor of surgery, Howard University College of Medicine, Washington, has been awarded the Spingarn Medal for 1943. This medal is awarded annually for the highest achievement by an American negro.

Dr. James A. Shannon has been appointed professor of pharmacology and chairman of the department of pharmacology at the New York University College of Medicine. Dr. Shannon has been actively engaged in research on malaria.

Dr. Italo F. Volini, professor and head of the department of medicine, Loyola University School of Medicine, Chicago, has been appointed dean of the school for the duration of the war. He takes the place of Commander Francis J. Braceland, Medical Corps, who is on leave with the Navy.

Dr. Howard T. Karsner, professor of pathology and director of the Institute of Pathology, Western Reserve University, Cleveland, delivered the first Frederick Robert Zeit Lecture at Northwestern University Medical School on May 18th. His subject was "Hepatic Cirrhosis."

Directory of Medical Specialists.—The third dition of the *Directory of Medical Specialists,* listing ames and biographical data of all men certified by he fifteen American Boards, is to be published early n 1945. The collection of biographical data of the Diplomates certified since the 1942 edition, and the evision of the older listings in that volume, are now oing forward rapidly. Diplomates are requested to nake prompt return of notices regarding their biog-aphies as soon as possible after receiving the proper orms from the publication office.

"Eye Bank" at New York Hospital.—An "eye ank" for the collection and preservation of healthy uman corneas which can be used in the treatment of ertain types of blindness, has been established at the New York Hospital. Nineteen other hospitals in New York City and Westchester County will cooperate, upplying the bank with corneas and drawing from it. This is the first "bank" of its kind to be established in he United States. It is pointed out that the operation ubstituting healthy corneas for damaged ones can re-tore sight in only one type of blindness—that caused olely by opacity of the cornea when the rest of the ye and optic nerves are normal.

Cancer Foundation. — The National Foundation for the Care of the Advanced Cancer Patients was in-corporated in New York on May 4th. Dr. Frank E. Adair, president of the American Society for the Con-trol of Cancer and chairman of the Cancer Committee of the American College of Physicians, is medical ad-visor of this foundation which has been created to pro-vide beds and care in already established institutions, or to finance the establishment of new institutions if necessary, to provide assistance for advanced cancer patients of "modern means". A sponsoring committee of sixty has been formed and the members of which in-clude many cancer specialists. It is the plan of the group to become national in scope, but in the imme-diate future the work of the committee will be con-centrated in the New York City area. There are at present in the metropolitan area twenty-one approved cancer clinics, caring for fifteen thousand patients.

Medical Care for the Merchant Marine.—An adequately trained medical representative aboard every cargo vessel by the end of 1944 is the aim of the War Shipping Administration. Dove-tailing the work of a purser and pharmacist's mate was considered to be the most economical way of providing adequate medical care for the Merchant Marine, and more than 1,200 junior assistant purser-pharmacist's mates have been graduated from the U. S. Maritime Service Hospital Corps School at Sheepshead Bay, N.Y., since Decem-ber 1942. In this school seamen receive instruction in anatomy and physiology, nursing and preventive medi-cine, including the giving of inoculations, ship's hygiene and sanitation, clinical laboratory work, pharmacy, and advanced first aid. This course is followed by one month's practical experience and training in a marine or other approved hospital. Many injuries, such as cut fingers, burns, abrasions, and shock received by a crew during two bombing attacks were promptly and ade-quately treated by a graduate of the Hospital Corps School. Medical officials of the War Shipping Admin-istration anticipate a postwar expansion of the train-ing program to one year. It is also planned to extend the course to other staff members.

Prescriptions Required for Quinidine.—Be-cause of an increasingly critical condition in the supply of quinidine, the War Production Board has tightened restrictions on this material by amending the Cinchona Bark and Cinchona Alkaloids Conservation Order M-131. A physician's prescription is now required of the ultimate consumer in order to obtain quinidine.

Health of Women in the Armed Forces.—The Office of War Information announces that the health of the women in the armed forces is at a high level. U. S. Navy findings in a test group of 6,400 showed that the Waves had increased their weight by an aver-age of five pounds and were found to be without nu-tritional deficiencies in clinical tests. In another test group posture and foot defects showed improvement, and there also was decided improvement in posture and carriage. Women Marines showed a gain of five to six pounds in weight after entering the Women's Reserve. Health safeguards for Wacs, Waves, Spars, and Women Marines include preventive measures, established through housing and living conditions, and proper food, good housing and living conditions, and proper recrea-tion, according to Army and Navy officals.

Symposium on General Surgery at Columbia.—A symposium on general surgery was given at Colum-bia University, May 15th to 19th. It was held in five New York hospitals, under the direction of the Faculty of Medicine of Columbia University and presented a review of recent developments in general surgery. Lec-tures and demonstrations were given in fourteen sub-jects, including the biliary tract, the thyroid, preoper-ative and postoperative care, the spleen, the small in-testine, the stomach and duodenum, surgery in in-fancy, the large intestine, the rectum, blood and plasma banks, estimation of the cardiac status in surgical pa-tients, the prevention of postoperative thrombosis, phlebitis and embolism, biochemical factors in wound healing, and the evaluation of emotional factors in sur-gical diagnosis. Participating hospitals were the New York Post-Graduate Medical School, and the Presby-terian, Mount Sinai, Babies, and Roosevelt Hospitals. A similar course will be offered in October.

American Psychiatric Association.—The Cen-tenary of the American Psychiatric Association was celebrated at the annual meeting held in Philadelphia, May 15th to 19th, wth Dr. Edward A. Strecker, of Philadelphia, presiding. The major theme of this meet-ing was the transition from war to peace and the re-habilitation of the war's wounded. Psychiatrists from both the United States' and Canada's armed services discussed advances made in military psychiatry and the steps now being taken to rehabilitate psychiatric casu-alties. Psychiatrists on the civilian front presented re-ports on research studies in certain social aspects of the national scene including child delinquency, psy-chological first aid in public health service, industrial mental hygiene, child psychiatry, and psychiatric nurs-ing. There were interesting discussions on convulsive shock therapy, prefrontal lobotomy, electroencepha-lography studies, psychosomatic medicine, alcohol neu-roses, and sleep disorders. One section of the meeting was devoted to "Psychiatry and the United States Navy," and the speakers included Rear Admiral Ross T. McIntire, Surgeon General, Commander A. R. Behn-ke, of Bethesda, Md., and Lieutenant Commander M. Wellman, of Ottawa, Canada.

Book Reviews

Tropical Diseases

Clinical Tropical Medicine. By Twenty-Seven Authors. Edited by Z. Taylor Bercovitz, M.D., Ph.D., F.A.C.P., assistant clinical professor, New York Post-Graduate Medical School, Columbia University, etc. With a foreword by Wilbur A. Sawyer, M.D., director, International Health Division, Rockefeller Foundation. New York and London: Paul B. Hoeber, Inc., Medical Book Department of Harper and Brothers, 1944. Pp. 957. Price $14.00.

Tropical diseases are numerous, have complications, and their symptoms are often misleading; therefore, diagnosis is difficult and mistakes are likely. The gamut runs from diarrheal diseases through protozoa, spirochetes, spirilla, rickettsiæ, viruses, bacteria, fungi, helminths, nutritional deficiencies, and body reactions, to poisonous snakes and insects. All of these are delineated in about one-thousand pages in this book which is well illustrated by drawings, diagrams and tables. There are several colored plates which are imperative in understanding blood dyscrasias and malaria as well as some other entities. The medical man "in the field" must often set up his laboratory under a tree or in a forbidding shack, and so we find here the simplest methods of carrying out these tests in workable detail. At "the front" one is more immediately concerned with prevention and treatment than "back home" where diagnosis and treatment are paramount. Anyone who has lived in the tropics is always under suspicion, or should be. Not many of us practicing in great cities in the U.S. are likely to recognize typhus, dengue, filiariasis, beriberi, or trypanosomiasis, certainly not without the help of a laboratory. This book gives emphasis to the importance of knowing the manifestations of tropical diseases which we are sure to have in our midst more and more as our boys return from areas where these diseases are endemic. The spread of an endemic to a possible epidemic is to be dreaded and fiercely resisted. Our Public Health Service is wide-awake to this danger, but its influence needs to be spread as far and wide as possible. Books like this one help greatly in doing just that. The volume is amazingly complete and is comprehensive and detailed so that it can be readily consulted in an hour of need. Dr. Bercovitz and his associates are to be congratulated on this "labor of love". The medical profession should be grateful.

Osler's Practice of Medicine

The Principles and Practice of Medicine. Originally written by Sir William Osler, Bart., M.D., F.R.C.P., F.R.S. Designed for the Use of Practitioners and Students of Medicine. By Henry A. Christian, A.M., M.D., LL.D., (Hon.) Sc.D., Hon. F.R.C.P. (Can.), F.A.C.P., Hersey professor of the theory and practice of physic, emeritus, Harvard University, etc. Fifteenth edition. New York and London: D. Appleton-Century Company, Inc., 1944. Pp. 1498. Price $9.50.

Originally the Studebaker Corporation made carriages and wagons and they were considered very good. As time went on, the automobile developed and they, being a progressive outfit, made good reliable automobiles. Today we are told that they make many weapons of war to satisfaction and for the service of our fighting men. Our readers may think that this is a rather queer beginning for a book review. We only brought it up in relation to Osler's *Practice of Medicine,* because we feel much the same thing has happened in the evolution of this revised, modern textbook. There is no question about Osler having been one of the great leaders in medicine. His grasp of the etiology of human ills and his approach to the handling of sick persons, never forgetting that they were persons, is sound and of great value to the medical profession. But practice of medicine has progressed a lot since Osler wrote his first edition and it is highly important that the textbook that he originally wrote be brought to the hands of the practitioner today in such a fashion that he can employ the text in his daily work and feel that it is more modern and authoritative. A textbook of this kind must sift and present the findings of countless workers throughout the world, for we know that in medicine greater progress in certain special fields will be made by men in institutions in England or Philadelphia, in France or San Francisco, or in Brazil, and it is the duty of medicine to search and review not only the work of one man or one locale particularly, but that of the entire world. We feel that this has been done in an extremely fair measure in this latest textbook of Osler's, as revised by Christian. At the present time one of the commendable things about the Osler book is its directness; its simplicity. In no way can it ever be accused of ever being dull or controversive. Perhaps we are biased but we feel it is one of the most clean-cut textbooks in the practice of medicine available today for the student or practitioner.

Aviation Medicine

Principles and Practice of Aviation Medicine. By Harry G. Armstrong, M.D., F.A.C.P., Colonel, Medical Corps, United States Army. Second Edition, illustrated. A William Wood Book. Baltimore, Md.: The Williams and Wilkins Co., 1943. Pp. 514. Price $6.50.

The first edition of this excellent book was published in 1939, and was immediately followed by reprintings each following year. This second edition attempts to clear up certain points which were controversial or speculative, and other subjects are discussed in so far as a necessary censorship in time of war permits. New material has been added including figures and tables, and certain chapters have been thoroughly revised. The author mentions the obvious handicaps to editorship under the urgency of war conditions in an overseas "theater" including the difficulty of proof-reading. As a specialty of medicine, aviation dates from World War I which gave impetus to the study of problems in the physiology of bodily conditions under maneuvers in the air. But as far back as 1662, Robert Boyle was beginning to make observations on the blood of animals exposed to varying air pressures. Then, in 1784, the American, Dr. John Jeffries, of Boston, carried out researches during balloon flights. This was 122 years after Boyle! Few know of Jeffries, and yet he was the first American to fly, the first to publish a book of aeronautics, the first to study scientifically the composition of the upper air, the first to carry "air mail" (he dropped a letter from a balloon), and the first to make a transoceanic crossing. How strange that we have not heard or read more about him!

Speed and space have much to do with physiologic changes in the body of a flyer. Above ten thousand

et he suffers anoxemia and must put on his oxygen ask at once or he will "blackout", his plane will be it of control, and he will fall. In practicing dive mbing from great heights at a speed of seven hun-ed miles an hour, terrible things happen to every ssue and organ of the body, and "air bends" upon nding are not uncommon. The Flight Surgeon stud-s these phenomena and advises with engineers how overcome them. Aviation medicine is a fascinating bject which still is in its swaddling clothes. In this ar it precedes and often exceeds in importance the re of wounded men. Their rescue and recovery is a oblem of speed, and aviation grants that in full easure. Armstrong's book still stands as the first d best of its kind.

Gastroenterology

astroenterology. In Three Volumes. Volume II. The Small and Large Intestine and Peritoneum: Diagnosis and treatment of disorders of the small intestine, colon, peritoneum, mesentery and omentum. By HENRY L. BOCKUS, M.D., professor of gastroenterology, University of Pennsylvania Graduate School of Medicine, and colleagues at University of Pennsylvania Graduate School of Medicine. Fully illustrated, including many in colors. Philadelphia and London: W. B. Saunders Company, 1944. Pp. 975. Price, three volumes and separate desk index, $35.00.

Many clinicians have been anxiously awaiting the cond volume of *Gastroenterology* by Bockus. The rst volume was well received, and we have heard a reat many favorable comments on the completeness f the handling of the subject matter on the esophagus nd stomach, and from our study of the second vol-me on the intestines and peritoneum, we feel that is will have an equally favorable reception. There is sincerity in the thorough presentation which strikes e reader. There is soundness of judgment and avoid-nce of the unnecessary complexities and theoretical nsiderations which so often mar a textbook of this ind. While this volume was completed under diffi-lt conditions as two of the physicians who had harge of certain sections of the book joined the armed rces before their part of the text was completed, evertheless, Bockus was successful in bringing the xt up-to-date as both of these men finished their ntributions after they were in the army. We feel at Dr. Bockus has made a real contribution in the eld of information on gastroenterology.

Otorhinolaryngology

ffice Treatment of the Nose, Throat and Ear. By ABRAHAM R. HOLLENDER, M.Sc., M.D., F.A.C.S., associate professor of laryngology, rhinology and otology, University of Illinois College of Medicine. Illustrated. Chicago: The Year Book Publishers, Inc., 1943. Pp. 480. Price $5.00.

The author rightly observes that surgical otorhinolaryngology has been well described in the periodical terature and books for many years past, but he notes hiatus in what may be termed "medical OLR". Surcal procedures are best and most safely carried out in spitals, but office practice permits a moderate amount "minor surgery". This matter is largely determined y the need for "bedding" the patient down following y procedure. It is unsafe to perform any operation one cannot be sure of as much asepsis as it is possible obtain. And where postoperative hemorrhage is like- or even probable, hospitalization should be the rule. While this book is quite comprehensive and, therefore, satisfactory in outlining the common agents and methods of treatment, it does not consider the causes of pathological alterations in the mucous membrane and the resultant changes in the quantity and quality of nasal secretions. This is a shortcoming which is common to OALR literature in general. Not enough work has yet been done on nasal physiology, although there is now a tendency in that direction. Much more is known about the physiology of the ears, but not in respect to "deafness" which is still more or less of *a terra incognita.*

Dr. Hollender has scanned the literature faithfully and well, and, in general, his conclusions are sound and dependable. The sulfa drugs, vitamins and the estrogens receive due mention and an attempt at evaluation. He recognizes fully the difficulties of his task, and has, on the whole, succeeded remarkably well in carrying it out.

Clinical Therapeutics

A Manual of Clinical Therapeutics. A Guide for Students and Practitioners. By WINDSOR C. CUTTING, M.D., associate professor of therapeutics, Stanford University School of Medicine, San Francisco, Calif. Philadelphia and London: W. B. Saunders Company, 1943. Pp. 609. Price $4.00.

Practically every physician has one or more manuals on therapy. A good book on the general subject is always a handy reference for both the student and practitioner. Of course, in so wide a field no subject can be covered in any but the briefest fashion; nevertheless, one cannot stop to read a lengthy tome every time one wishes to refresh one's mind or get an outline of a pathological condition. This is not the type of book a specialist requires in his practice, or perhaps we are wrong, as he may be so immersed in his specialty that he gives scant heed to remote conditions which may exist in his patient. However, the book is extremely well balanced inasmuch as it does not explain any one malady at the expense of another, and doubtless the book will find a field of usefulness among practitioners of medicine.

Medical Malpractice

Medical Malpractice. By LOUIS J. REGAN, M.D., LL.B., member of the State Bar of California. St. Louis: The C. V. Mosby Company, 1943. Pp. 256. Price $5.00.

We doubt if many medical practitioners have a clear-cut concept of the intricacies of medical malpractice. Of course, most situations which may be interpreted as malpractice can be reasoned out through common sense and with a due respect for medical ethics, but there are an infinite variety of situations which may arise which may be interpreted legally as medical malpractice and which would not necessarily coincide with the ordinary concept of common sense or medical ethics.

We feel that every man practicing medicine would do well to acquaint himself with some of the intricacies of medical malpractice in many of its ramifications. Of course, the laws of one state may be somewhat different from others, and it might be helpful to avoid those states which take exception to the practice towards which some one doctor may be inclined.

We feel that this book, written by a physician and a member of the bar, is one of the most illuminating that has been written on the subject. It is written in simple language that can well be understood by the practicing physician and should prove a valuable aid to both physicians and members of the legal profession.

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JUNE 1944

Medicolegal Notes

Medical Expert Opinion on Disability

In an action to set aside an award by a workmen's compensation board by the claimant against the employer's insurance carrier, the extent and duration of the claimant's disability were hotly contested. On appeal from a judgment for the claimant it appeared that a medical witness for the insurance carrier had examined the claimant twice within eight days, and on this examination he based his opinion that the claimant's condition was good and that he would make a complete recovery in from six to twelve months from the date of the injury, which occurred nine months before the doctor's examination.

The claimant's wife testified that after the examination the doctor told her that no doctor would take upon himself the responsibility to determine the length of time it would take anybody to recover from such a fracture as the claimant had sustained; that paralysis would probably take place any time within a year or fifteen years hence, from the effect of the head injury he had sustained.

The court rejected the objection that this testimony should be excluded because it was speculative. The doctor was called by the insurance carrier, which thus vouched for his qualification to give the opinion which the claimant sought to discredit by proving a differe opinion by the doctor.

The court said the evidence complained of was doub less hearsay, but based its opinion on the rule state in *Wigmore on Evidence*, Vol. II, 1129, sec. 1018, being "that the use of prior self-contradictions to di credit is not obnoxious to the hearsay rule". Texas I demnity Ins. Co. vs. Alexander, Texas Court of Civ Appeals, 174 S. W. 2d 109.

Expert Evidence as to Cause of Injury

A gasoline station attendant stooped down to pla a bent gun on a low cabinet shelf. When he started straighten up he was taken with a sharp pain in th lower part of the back, was unable to straighten u and his legs became numbed. His injury was diagnose as a herniation of the intervertebral disc in the lum bar vertebræ. The medical evidence established th the accident was a competent producing cause of t injury. An award of disability compensation under t New York Workmen's Compensation Act was affirm on the authority of Jordan vs. Decorative Co., 2 N. Y. 522, 130 N. E. 634. Strong vs. J. B. Lang Engi and Garage Co., Inc., New York Appellate Divisio March 11, 1942, 35 N.Y. S. 2d 467.

Evidence of Heat Prostration

A watchman, also a policeman, at an airplane factor died in the middle of August on a day when the tem perature was from 76 to 80 degrees Fahrenheit, wit humidity from 83 to 87 degrees. He was stationed in small frame building fifteen by twenty-five feet an eight feet high. The roof was black tar paper and t temperature would be ten to fifteen degrees above tha outside. The man collapsed about 4:30 p.m., w flushed, vomited frequently, suffered from headac and diarrhea. The New York Appellate Division, Buc holtz vs. American Terminal Warehouse Corp., 2 A. D. 859, 24 N. Y. S. 2d 744, affirmed an award death benefits, holding that the lay and medical ev dence sustained the finding that the death was fro heat prostration.

Evidence of Accident

In a workmen's compensation case, the New Yo Appellate Division will not weigh substantial medic testimony both ways on the issue of whether deceden who died of a subarachnoid hemorrhage of the brai sixteen days after striking his head against an ove hanging pipe, died as a result of an injury sustained the accident. Bensen vs. E. H. Badger and Sons C 24 N. Y. S. 2d 782, 261 A. D. 860.

Early Closing of Drug Stores as a War Measure

A city ordinance passed by the commissioners Union City, Hudson County, New Jersey, in conjun tion with the governing bodies of adjoining muni palities as a war measure, requiring the closing of dr stores at specified hours, 9 p.m. on Sunday, 11 p.m. Saturday night, and 10 p.m. for the balance of t week, was held not an unreasonable exercise of the city statutory powers in the interests of public health an safety and not a violation of the Fourteenth Amen ment to the Federal Constitution. Spiro Drug Servic Inc. vs. Board, 30 A. 892. This judgment was affirme by the New Jersey Court of Errors and Appeals, Sep 16, 1943, 33 A2d 872.

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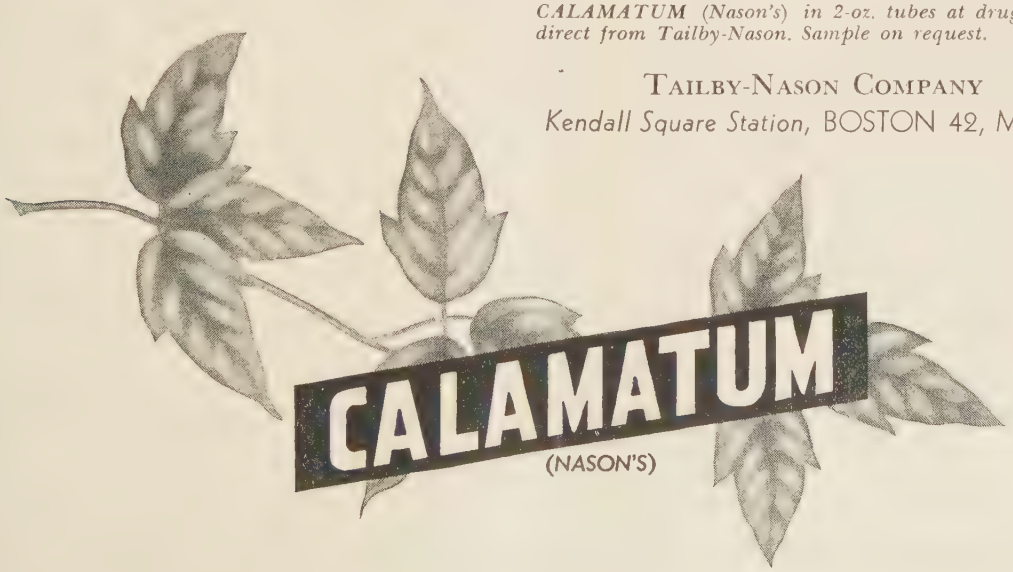

Critique

Fats and Oils Shortages of fats and oils severely menace the diet of most nations at war. In this respect we are doing very well, though. The production of fats and oils from domestic materials totaled 10.7 billion pounds in 1943 as compared with 8.2 billions in 1939. Lard, soybean oil, tallow, grease, and linseed oil (from domestic flaxseed) have shown the greatest expansion under wartime programs to increase the output of fats and oils, carried on by agencies in the War Food Administration. Butter production has declined because so much milk has had to be diverted to other uses. The production of peanuts has increased very rapidly, but most of the increase has been utilized to make peanut butter, candy, and salted nuts.

However, requirements for fats will be larger this year than last. Lend-Lease shipments will continue at a high level. Military needs will expand. If the war should end in 1944, European relief requirements will be heavy. Hence the domestic fat and oil situation may tighten severely before the year is over.

In 1943 we got rid of forty-six to forty-seven pounds of fats and oils per capita; compare with fifty pounds during 1940-42 and forty-eight during 1935-39. We were not doing badly at all. Butter consumption decreased three pounds per capita from 1942 and was more than four pounds under the 1935-39 average. This was partly offset by an increase of about a pound per capita in margarine consumption, despite trade efforts to prove that margarine is not food.

Present indications point to a further decrease in butter supplies. But a properly made margarine, properly fortified with the requisite vitamins, is quite a good nutritionally as butter, except for the young fo whom butter supplies better fat to grow on. Further more, if you color the margarine artificially and wit care, it becomes practically indistinguishable from th artificially colored butter we have been eating thes many years.

Europe as a whole is a deficit fat-producing area though southeastern Europe normally produced a smal surplus of fat for export. Hungary, Yugoslavia, Al bania, Rumania, Bulgaria, and Greece combined ha an annual prewar export surplus of about 125 millio pounds of fats and oils, including oil in exporte seed. These consisted in the main of olive oil, sun flower seed and oil, rapeseed, soybeans, and lard.

Since 1935 the Germans have encouraged increase oilseed production in the Danube countries; how suc cessfully is not known. But even a large increase ther would do little to relieve the European fat shortage The prewar fat consumption of the Continent, Russi excluded, was about fourteen and a half to fiftee billion pounds. Net imports, including whale oil and o in imported materials, accounted for four billion pound of this. The production of animal fats and oils in Eu rope has declined materially since 1939.

How to Spread Disease The following fascinatin item from the *J.A.M.A.* March 23, 1929 (p. 987) speaks for itself: "A rathe bizarre and not unlikely method of transmission o typhoid was recently reported by Hervey (*Am. J. P. H.* 19:66). Thirteen cases of the disease occurred in hospital and were found to be due to the practice o using the same drip apparatus interchangeably be

To Hasten the Slow Convalescence

following respiratory infections give your patient the bitter tonic benefits of

Gray's Compound

Such cases do well on the Gray's Compound Formula: Gentian, Dandelion, Wine, Glycerine, Phosphoric Acid, Tr. Cardamom Comp. and Sugars.

In these days when it is essential for patients to "get back on the job" as soon as possible, you will find Gray's Compound a valuable addition to your armamentarium.

THE PURDUE FREDERICK COMPANY

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•ANGINA PECTORIS

and other Cardiovascular Conditions

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Isotonic Colloidal Iodine Cacodylate

The special iodine in CACODYNE becomes an intimate part of the body chemistry for prolonged iodine effects and glandular sustenance. Its benefits are obtained without sedatives, vasodilators or stimulants. Over 25,000 injections of CACODYNE have been administered without local or general reactions.

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tween patients without sterilization. The original source was a patient in whom typhoid developed on the fourteenth day after admission to the hospital. Nurses and other employees gave negative results in laboratory examinations. This somewhat fortuitous (note masterful understatement, CRITIC) outbreak is another indication of the importance of every reasonable precaution to prevent contact of persons with infection, whether personally and directly or through inanimate objects. Fortunately, typhoid contracted in hospitals is practically a relic of the past."

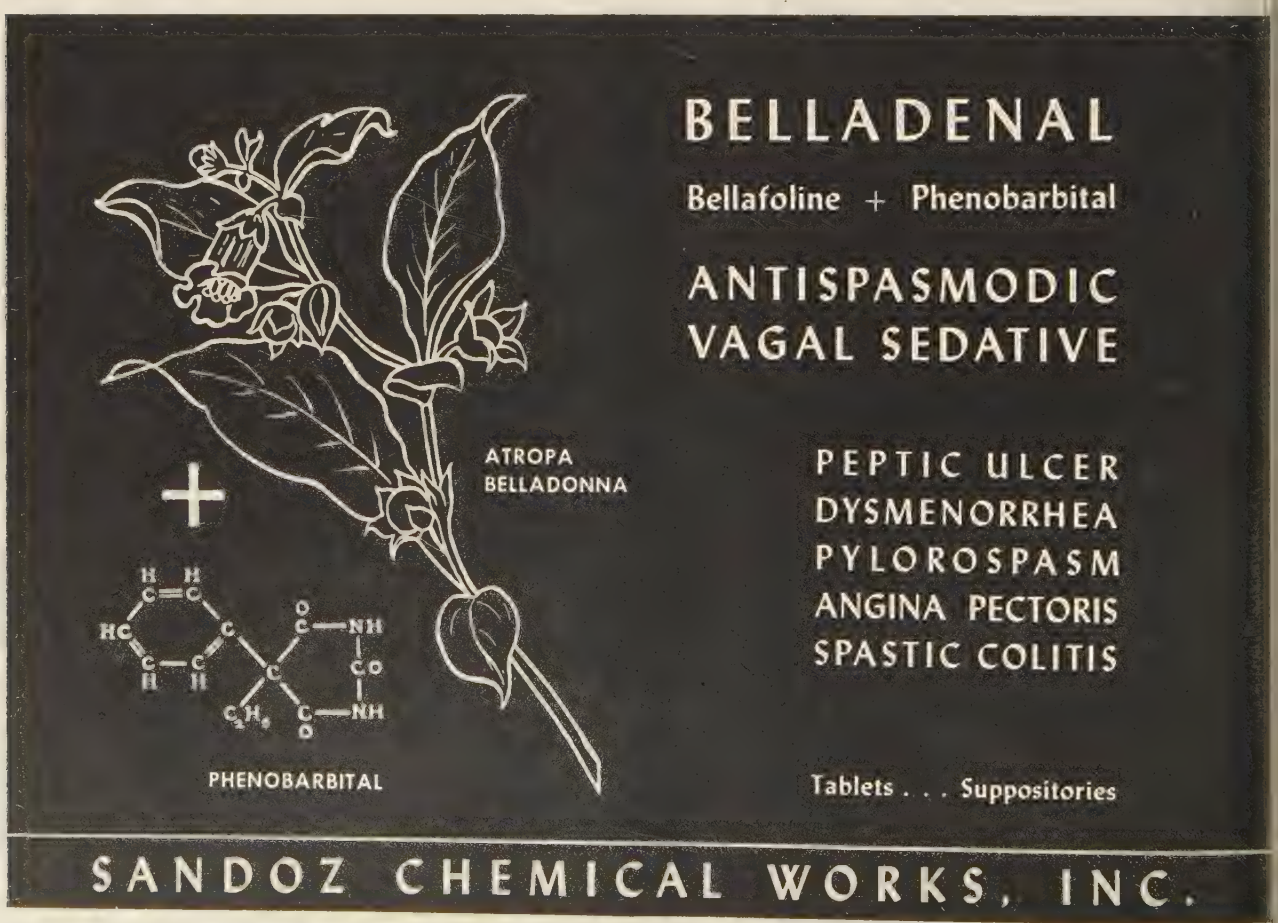
Scientific Publication Again

In *Science,* February 8, 1929, the managing editor of the *Journal of Morphology and Physiology,* repined that some forty thousand titles appeared annually, scattered through some seven or eight thousand periodicals, making a grand total of a half million pages. Meanwhile everyone had less and less time to read. The situation looked pretty unhappy. One difficulty cited was that scientific authors too often merely set down subjective impressions rather than factual expositions for the information of readers. Reader's needs were neglected and articles were at least half as long again as they needed to be. Biological papers were more verbose than those in the fields of chemistry and physics; they contained too much historical survey and too many embalmed quotations of the opinions of others, while clear exposition was conspicuously absent. The writer, Prof. Clarence E. McClung, felt that too many scientific authors believed their own interests to be paramount and adopted a sort of to-hell-with-the-reader attitude. There were too many encumbering tables which could interest only a few. Too many bibliographical citations appeared. The scientific author seemed to feel that the results of their investigations belonged exclusively to them, forgetting the agencies that paid salaries and expenses, and the fellow workers who originally trained him, after introducing him to the subject, and provided him with the background against which he worked. McClung said: "The oft-repeated criticisms of the style of English found in scientific articles may trace back to faulty analysis and planning rather than to misuse of words or constructions. We may not be justified in demanding that the articles we read be entertaining, but at least we can ask that they be clearly informative."

Licorice

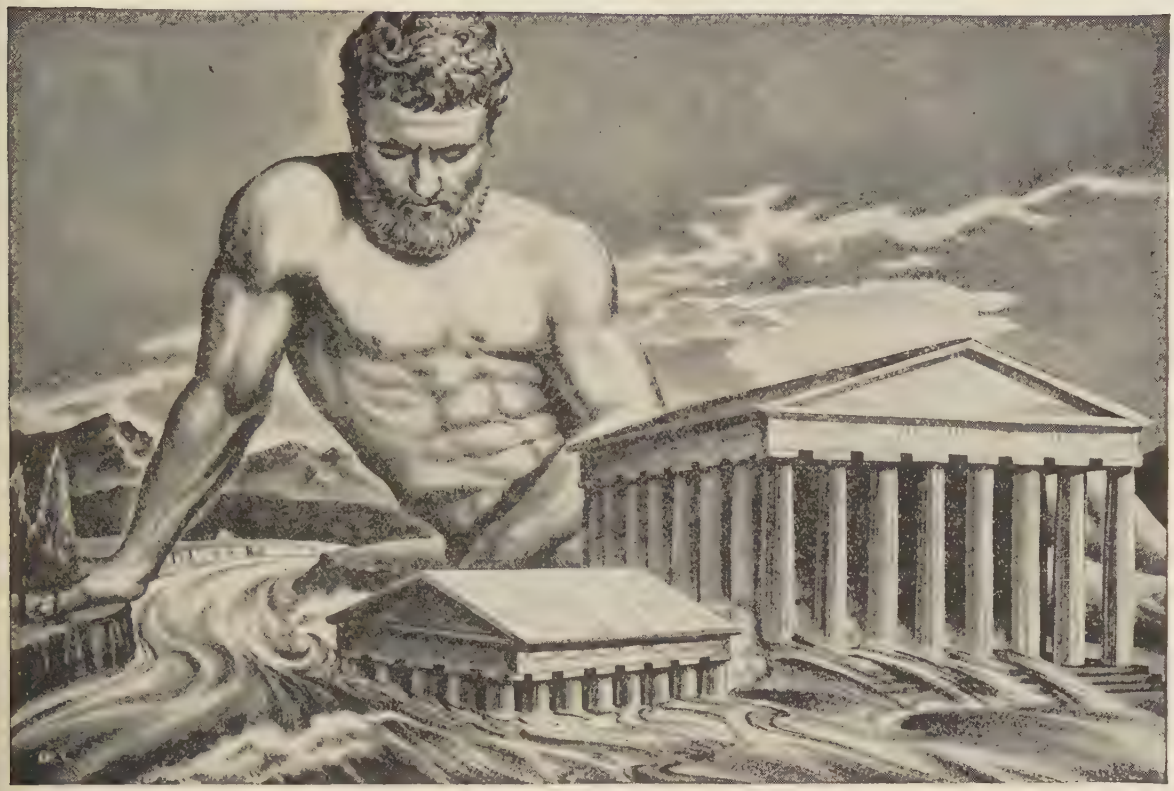
In the *Journal of the American Pharmaceutical Association,* February 1929, George D. Beal and H. T. Lacey discussed the history of licorice in pharmacy. The drug was used in ancient China and still survived in Chinese apothecary shops. It also was used in India and in ancient times and by the ancient priests of Egypt. Hippocrates advised it as an external application for sores, along with honey or ointment, while Nero's celebrated physician, Andromachus of Crete, used it in his equally celebrated theriaca. The Chinese and Hindus used licorice as a tonic for thousands of years, while much more recently the Norwegians used it as a counter-poison. In 1929 it was still used in modern medicine as a remedy for stomach acidity and for intestinal inflammation. But the Critic's mother regularly purged him with licorice in the late nineties, or said she did; with just what results memory saith not.

THE CRITIC



HERCULES KNEW THE POTENCY OF

Liquid Bulk



WHEN commanded to clean the stables of Augeas, where 3000 oxen had been kept for many years, Hercules solved this stupendous problem in one day by diverting the rivers Alphaeus and Peneus to run through the waste-laden stables.

Similarly, in the intestinal tract, there is no more efficient method of flushing away waste than by the use of *liquid bulk* —as formed by Sal Hepatica plus water.

Clinical and laboratory tests prove that:

★ in the isolated loop of a dog's ileum, a laxative solution of Sal Hepatica increased the liquid bulk by 34 per cent in one hour.

★ in thistle tube experiments, a Sal Hepatica solution increased the liquid bulk by 100 per cent within 6 to 12 hours.

★ Sal Hepatica's liquid bulk helps stimulate bowel muscles, maintain a proper water balance. And the salines of Sal Hepatica relieve gastric acidity, promote the flow of bile.

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Iconography of Vitamin Deficiences

An exhibit consisting of seven unretouched co photographs revealing symptoms of vitamin B_2 ficiency that often are not immediately recognized ha been reproduced and are being circulated to the me cal profession by the Winthrop Chemical Compan Inc. The pictures were originally made at the Nut tion Clinic, Hillman Hospital, Birmingham, Ala., u der the supervision of Dr. Tom D. Spies, director.

All the pictures show common pathological chang due to vitamin B_2 deficiency. It is pointed out th illustrations cannot tell the entire story of the cons quences of vitamin depletion. Hypovitaminosis a avitaminosis result from chronic vitamin starvati hence, restitution to normal can take place only giving sufficiently large amounts of the lacking fact over a prolonged period.

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THE frequency with which the menstr al life of so many women is marred by functional aberrations that pass the borderline of physiologic limits, emphasizes the importance of an effective tonic and regulator in the practicing physician's armamentarium.

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May we send you a copy of the comprehensive booklet "The Symptomatic Treatment of Menstrual Irregularities."

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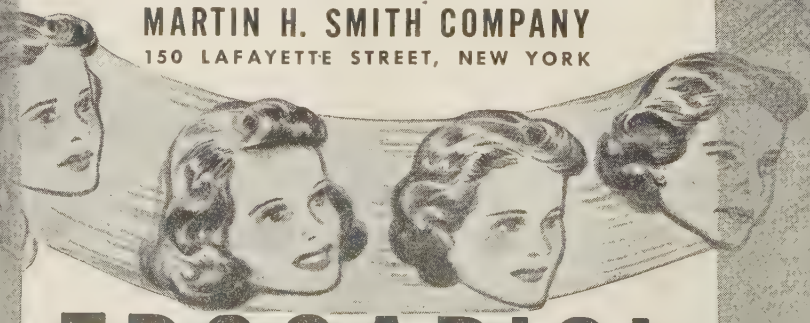

INDICATIONS
Amenorrhea, dysmenorrhea, menorrhagia, metrorrhagia, in obstetrics.

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DOSAGE
1-2 cap. 3-4 times daily.

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In ethical pkgs. of 20 cap.

Lowering blood pressure of hypertensive patients must be done safely to avert fatalities. Sustained effect and low toxicity should characterize the medication employed, qualities difficult to achieve with the nitrites and barbiturates respectively.

HEPVISC has proved a valuable hypotensive, with extensive clinical use. Not only does it bring blood pressure down in a gradual manner, but its effect is sustained. Striking relief of hypertensive symptoms such as headaches, dizziness and tinnitus also ensue with the administration of HEPVISC in well over 80% of cases.

Each HEPVISC Tablet contains Viscum album extract 50 mg., hepatic desiccated substance 60 mg. and insulin-free pancreatic desiccated substance 60 mg.

INDICATIONS: Essential hypertension, benign hyperpiesia, fibrotic kidney and hypertension accompanying pregnancy.

DOSAGE: Average dose is 3 to 6 tablets daily, in divided doses ½ hour before meals. Continue treatment for 2 to 3 weeks with a week's interval between courses.

BOTTLES OF 50 AND 500 TABLETS

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Rehabilitation of Disabled Soldiers

Major Ora L. Huddleston, (*Archives of Physical Therapy,* February 1944) discusses the convalescent ward program carried out at Fitzsimons General Hospital, Denver, Colo., in the rehabilitation of disabled soldiers. He points out that the medical and surgical care of patients in the Army is different from that in civilian practice. In many cases long periods of hospitalization are necessary and something more than rest and diet seem to be required. The individual as a whole must be treated, his mental and emotional ailments, as well as his physical disabilities.

The aims of the program carried out at the Fitzsimons General Hospital are both therapeutic and preventive. While the therapeutic aims are to hasten recovery, to obtain the maximum degree of physical fitness, and establish a wholesome mental attitude, the preventive objectives are those of minimizing demoralization and preventing the development of unhealthy mental changes. The means of attaining these objectives are: To dispense as soon as possible with hospital routine and restore the patient to semimilitary duty as soon as his state of convalescence will permit; to establish an intensive activity program planned to keep each patient occupied throughout the day, and to improve the patient's morale by keeping him busy and diverting his attention from preoccupations associated with his injury. In improving the mental attitude of the individual patient the morale of the entire group is improved.

While many of these aims have been achieved, the author believes there is room for improvement. He suggests the beginning of the reconditioning of the patient as soon after admission as possible. He emphasizes the rehabilitation of the patient as a whole, rather than limiting treatment to his physical ailment. The early use of occupational therapy should be instituted in the wards even before operation, and supervised therapeutic exercises in the wards and a more extensive use of occupational therapy are recommended. Additional educational lectures and demonstrations, educational moving pictures and forum or panel discussions of topics of current interest are also recommended. He says that more medical officers should be trained in rehabilitation therapy.

Pharmaceutical Shortages in Germany

A recent news dispatch from Berne, Switzerland, reports acute shortage in Germany of medicinals and the ordinary equipment for illness. According to *Hospital Topics* (Feb. 1944), there are no iodine and lysoform; laundry soap in small quantities is used for operations. There is extreme shortage of hospital space, and not enough gasoline for doctors to make sick calls. Among rationed items are bandages which are being replaced by cellulose. Prescriptions are necessary to buy cotton wool, headache pills or purgatives, or in an emergency the latter can be administered at the drug store. Grape sugar and other tonics must be ordered by a doctor; coffee and tea can be served to patients in quantities of one half gram daily on special order only. Alcoholic beverages are limited in hospitals, and their use is forbidden to doctors and personnel. The growing demand for medicines containing vitamins to supplement the inadequate food rations cannot be met. The run on herb remedies has resulted in the disappearance of camomile from the market.

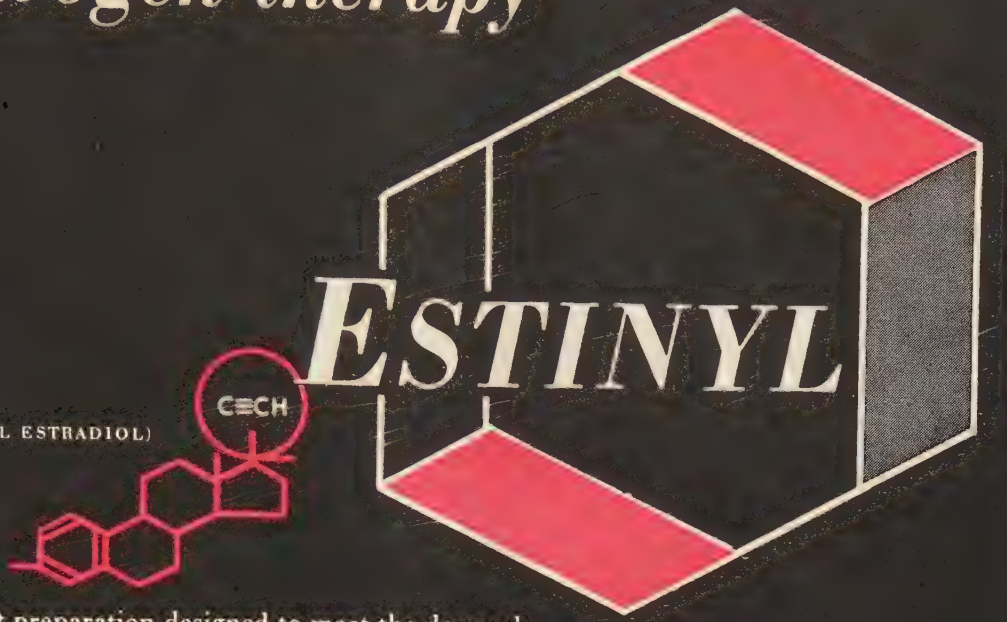
PASADYNE

gives marked relief in both cardiac and bronchial asthma, and in asthma of peripheral reflex origin.

It does not disturb the digestion and produces no subsequent nausea and depression.

JOHN B. DANIEL, Inc. Atlanta, Georgia

A significant contribution to estrogen therapy



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A tablet preparation designed to meet the demand for an oral estrogen capable of providing all the valued benefits of the true natural hormone at a cost comparable to that of synthetic preparations, and yet, extremely well-tolerated. More potent than any other oral estrogen, ESTINYL alleviates menopausal symptoms readily, and bestows a heightened feeling of general well-being.

Average dose consists of two or three ESTINYL Tablets of 0.05 mg. daily for 1 to 2 weeks, after which one tablet daily or every other day may suffice. If symptoms are easily controlled, one ESTINYL Tablet of 0.02 mg. may be found adequate for maintenance therapy. Available in bottles of 30, 60 and 250 tablets.

Literature on Request

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Nothing is more aggravating to nervous patients than long waiting periods before sleep makes its appearance.

One dessertspoonful of Neuronidia at bedtime usually produces mental relaxation and slumber that come promptly upon retirement.

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Physical Therapy Equipment Now Availabl

Restrictions on the manufacture and sale of physi therapy equipment have been eased, according to announcement by the War Production Board, and me ical practitioners and hospitals may now buy certa types of equipment that formerly were manufactur only for the armed services and lend-lease. Medic practitioners may also buy other types formerly stricted to these groups and to hospitals. In additi three types of physical therapy equipment, genera approved by the medical profession for home use, m now be sold to the public on prescription or order o licensed medical practitioner.

Types of equipment that may now be manufactur are: electric bakers, fever cabinets, galvanic gene tors, infrared generators, low voltage generators, ma netic field generators, medical diathermy units, passi vascular exercise apparatus, surgical diathermy uni ultraviolet radiation equipment, and whirlpool bat These items may be sold to the armed services, to le lease, for licensed export orders, to hospitals and me cal departments of industrial concerns, medical pra titioners, and to distributors for delivery to these use

Three types of equipment (electric bakers, infra generators and ultraviolet radiation equipment) m be sold or rented to the public upon written presc tion of a medical practitioner licensed to use physi therapy equipment. Formerly, the only types th could be made for civilian use (hospitals) were el tric bakers, fever cabinets, major ultraviolet rad tion equipment, passive vascular exercise apparat and surgical diathermy units.

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The Dartell Formulation of an

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. . . employing every known synergistic factor compatible with the hormone itself in an inunction base compounded for rapid percutaneous assimilation. Each cc contains 5,000 I.U. of natural female sex hormones.

DPS FORMULA 302
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This American is *not* expected to buy an extra War Bond in the 5TH WAR LOAN

But we are.

For each of us here at home, the job now is to buy extra Bonds—100, 200, even 500 dollars worth if possible.

Many of us can do much more than we ever have before.

When the Victory Volunteer comes to you and asks you to buy extra Bonds, think how much you'd give to have this War over and done.

Then remember that you're not *giving* anything. You're simply *lending* money—putting it in the best investment in the world.

5TH WAR LOAN

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MEDICAL RECORD

This is an official U. S. Treasury advertisement—prepared under auspices of Treasury Department and War Advertising Council

When a minor disturbance becomes a MAJOR threat to

INDUSTRIAL PRODUCTIVITY

Gatsro-intestinal disturbances rank second as a cause of absenteeism from illness, accounting for approximately 20 per cent of all days so lost! And high on the list of such conditions are the common "upset stomachs" from indiscreet eating or drinking.

For prompt symptomatic treatment of functional dyspepsias—as well as nervous and intestinal indigestion, gastralgia, etc.—many physicians prescribe Peptenzyme Digestant Tablets, containing pepsin with desiccated pancreas and duodenum —and providing valuable proteolytic and amylolytic enzymes. Peptenzyme Digestant Powder—similar in composition—is available for use in dry prescriptions.

Let these two established preparations help you keep G-I patients on the job.

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Supplied: As 5-grain tablets in bottles of 25, 100, 500 and 1,000 tablets. Powder: 1 oz. and 8 oz. bottles.

Dosage: Two tablets before and after meals, increased if necessary Powder: As a digestant—from 10 to 20 grains with each meal.

PEPTENZYME DIGESTANT TABLETS

Burns About the Eyes

Burns of the eyelids and conjuncti were discussed at a meeting of t Section of Ophthalmology of t Royal Society of Medicine (*Br Med. Jour.*, Oct. 23, 1943) and i portant safeguards described. In t Navy, the introduction of cellulo acetate goggles with certain heat r sisting material for the face ha greatly cut down the incidence such burns. The two fundament needs in this type of burn are t elimination of sepsis, and skin graf ing in third degree burns. Triple d jelly has produced good results. Sin many burns are encountered on sma ships, instruction in the use of a antiseptic coagulant that would pr vent excessive fluid loss is consider important. From the reliance on intr venous saline or plasma for all burn opinion has now swung to a great use of fluids by mouth for many suc cases.

In the R. A. F. the two importa types of burns were the second degre affecting only the epithelial layer, an the third degree, destructive of th dermis. A marked feature of burns the face was the amount of edem from even moderate burns. The glob was rarely involved, though such i volvement should always be looke for on first examination. Conjunctiv involvement was common in burn due to instantaneous combustion magnesium used in flash bombs.Trea ment of burns in the R. A. F. followe the same principles as in the Navy prevention of infection and assistanc by skin grafting if normal healing di not take place readily. Application sulphonamide on coarse mesh p troleum jelly gauze made a soft, no traumatic dressing. Penicillin was e fective for eliminating streptococc and staphylococci from granulatin surfaces. Keratitis was fairly frequen

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FIXED CHARGES
MINIMUM HOSPITALIZATION
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43 SUCCESSFUL YEARS
TREATING DRUG AND ALCOHOL CASES
EXCLUSIVELY
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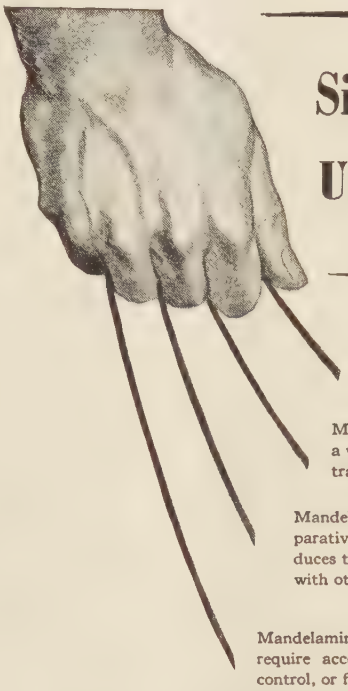
enereal Disease Among Civilians

The Office of War Information, in report on venereal diseases among dustrial workers, stated that an in-ease of eleven percent in new re-rted cases of gonorrhea among ilians in the United States was own by the most recent compila-n by the U. S. Public Health rvice of reports of State health icers. The compilation covered the riod from July 1st to December 3, 43. During the period under re-ew 158,000 new cases of gonorrhea re reported nationally as com-red with 137,000 for the corre-onding period in the previous year. New reported cases of syphilis in e same period showed a decline of teen percent. However, preliminary ures from some states indicated, e U. S. Public Health Service stat-, a definite increase in reported ses of infectious syphilis in the age oup of fourteen to twenty-four.

The extent to which the civilian pulation is affected by venereal sease is indicated by the report of e U. S. Public Health Service for e fiscal year 1943: 861,000 cases syphilis and gonorrhea were re-rted—almost seventy percent more an the combined total of 514,300 ported cases of diphtheria, malaria, eningitis, pneumonia, poliomyelitis, arlet fever, smallpox, tuberculosis, phoid, paratyphoid, and typhus.

The total of 861,000 venereal dis-se cases represented 579,000 cases syphilis and 282,000 of gonorrhea, an attack rate for the fiscal year 943 of 4.4 per thousand for syphilis nd 2.2 per thousand for gonorrhea.

Available Public Health Service re-rts indicate that the proportion of dustrial workers infected with ve-ereal disease may range from one-alf of one percent to ten and one-alf percent in various locations and dustries.



Simplifying control of
URINARY INFECTIONS

Mandelamine (methenamine mandelate), as a result of its chemical structure, promotes an intensified bactericidal action.

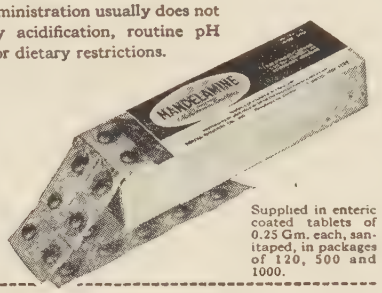
Mandelamine evidences effectiveness against a wide range of organisms common in urinary tract infection.

Mandelamine therapy, because of the comparatively small effective dosage, rarely produces the toxic reactions frequently observed with other urinary antiseptics.

Mandelamine administration usually does not require accessory acidification, routine pH control, or fluid or dietary restrictions.

MANDELAMINE

Reg. U. S. Pat. Off. (Methenamine Mandelate)



Supplied in enteric coated tablets of 0.25 Gm. each, sanitaped, in packages of 120, 500 and 1000.

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ELIXIR BROMAURATE

GIVES EXCELLENT RESULTS

Cuts short the period of illness and relieves the distressing spasmodic cough. Also valuable in other **Persistent Coughs** and in **Bronchitis** and **Bronchial Asthma.**

In four-ounce original bottles. A teaspoonful every 3 to 4 hours.

Recommended in Medical Literature.

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Somatic Manifestations in Psychoneurosis

Ian Douglas-Wilson, of the Royal Army Medical Corps (*British Medical Journal,* March 25, 1944) says that during this war psychoneurosis presents such a wide variety of somatic symptoms that a positive psychiatric diagnosis is often difficult. In a military hospital in England a diagnosis of psychoneurosis was made in 231 cases. The symptoms prepared in 202 of these cases were dyspnea, palpitation, precordial pain, etc., headache, respiratory, abdominal, and urinary symptoms, rheumatism, and other motor and sensory disturbances. A predisposition to mental disorders was found to exist in nearly all of them.

Cardiac symptoms had been suggested to some by long confinement to bed or by warnings to avoid exertion, in others, the energetic service life had directed attention to the heart. In several, more than one extrinsic factor had produced the condition. Associated phobias were sometimes present. Chest symptoms were commonly associated with fear of tuberculosis, in which there was a family history in half the cases. Gross dyspnea was the rule. Headache was seldom of a type that suggested organic disease. The patient was often preoccupied with the possibility of brain tumor or insanity, and, where the condition followed head injury, with the possibility of further trauma. Abdominal symptoms, except when due to hysteria, tended to conform to one of three groups of symptoms. In some there was definite physiological disturbance. Urinary symptoms were reported by patients of immature and dependent type. Somatic manifestations, when due to anxiety states, usually conform to definite patterns.

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Consult Your Telephone Directory For Office Nearest You.

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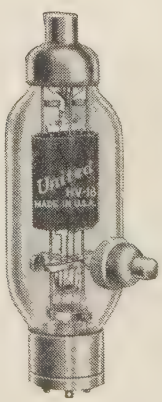
DIATHERMY TUBES by UNITED



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Write for descriptive folder and tube replacement guide, for correct selection of type required for your machine. (There are 12 different types.)

Available at your surgical supply house or radio parts distributors.

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An Effective Urinary Antiseptic

Mandelamine, the chemical combination acid and hexamine, is an effective chemotherapeutic agent in the treatment of urinary tract infections. (Pyelitis, cystitis, prostatitis, preliminary to instrumentation or surgical procedures, urinary infections attending colonic and anoproctologic diseases, urinary infections in children, and to control the infective process in renal calculosis). It is well tolerated and easily administered to adults as well as children and does not require any of the routine controls of pH, fluid intake, etc., so often associated with many of the urinary antiseptics available today.

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